DIAMOND K GYPSUM, INC.
1720 SOUTH RED HILLS DR.
RICHFIELD, UT 84701
435-896-8870

NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Submitted to

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

In accordance with

The Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953,
General Rules and Rules of Practice and Procedures

I. Rule R647-4-104 - Operator(s). Surface and Mineral Owners

APPROVED
AUG 11 2009
DIV. OIL GAS & MINING

1. **Mine Name:** Chalk Hills Quarry

2. **Legal name of entity:** Diamond K Gypsum, Inc.
Mailing Address: 1720 South Red Hills Dr.
City, State, Zip: Richfield, UT 84701
Phone: 435-896-8870 Fax: 435-896-8893
E-mail Address: karen@diamondkgypsum.com

Type of Business: Corporation registered to do business in the State of Utah as Entity #1258952-0142

Local Business license #390
Issued by: Sevier County

Registered Utah Agent (as identified with the Utah Department of Commerce) (*if individual leave blank*):
Name:
Address:
City, State, Zip:
Phone: Fax;
E-mail Address:

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3. **Permanent Address:** 1720 South Red Hills Rd., Richfield, UT 84701
Phone: 435-896-8870 Fax: 435-896-8893

4. **Contact Person** for permitting, surety, and Notices:
Name: Karen Palmer Title: President

(b) Borders of existing quarry, 4.95 acres, the proposed new mining area, 12.58 acres, and the future mining area, 49.70 acres. Block divisions shown are for reference only and do not represent specific time periods. Actual advance rate will depend on gypsum bed thickness and purity.
(c) There are no known test pits or drill holes in the future mining area.

This proposal does not contemplate stationary mining/processing equipment, utilities, power lines, drainage control structures, or tailings or processed waste facilities, disposal areas for overburden, solid and liquid wastes, or wastewater discharge treatment and containment facilities.

105.3. Additional Maps

Reclamation is contemplated to be ongoing as soon as the quarrying operation moves south from the current pit onto newly-permitted ground (see Map CHQ-105.2). Year 1-2 reclamation will consist of reclaiming all of the original pit except for the access road, that portion of the haul road extending south to the Year 1-2 pit, and the fuel tank – tool and storage shed area. Reclamation will move south in this fashion as the quarry is extended throughout the life of the mine. Reclamation will consist of grading mined areas to approximate original contour to the extent possible, including restoration of pre-mining drainage patterns and an approximation of pre-mining hummocky topography. No highwalls exceeding 45° or slopes exceeding 3h:1v will be left except at the base of natural slopes exceeding 3h:1v along the west side of the ridge which forms the boundary of the east side of the mining area, where the pit margin will

TABLE 1 – SEED MIX

PLANT COMMON NAME	PLANT SCIENTIFIC NAME	POUNDS PER ACRE
Grasses		
Indian ricegrass	*Oryzopsis hymenoides*	2
galleta grass	*Hilaria jamesii*	2
Russian wild rye	*Elymus psathyrostachys*	2
Shrubs and Forbs		
fourwing saltbush	*Atriplex canescens*	2
Castle Valley Clover (Gardner Saltbush)	*Atriplex garneri*	2
shadscale	*Atriplex confertifolia*	2
winterfat	*Eurotia lanata*	1
scarlet globemallow	*Sphaeralcea coccinea*	½
Total		13½

be sloped to blend into the natural slopes above. Waste rock, which is mostly weathered gypsum and gypsiferous shale from thin layers within the gypsum bed, will be spread over the graded surface and topsoil over the waste rock; distribution, compaction, scarifying, and so on will be as directed by the Bureau of Land Management. The area will be reseeded between September 1 and November 1 following completion of reclamation operations depending on moisture conditions with the seed mix given in Table 1.

Map CHQ-105.3: New Mining Area Reclamation Map, October, 2008, Contour Interval 5 ft, Scale 1" = 200'

The map includes:

(a) New Mining Area to be reclaimed as described above; exact area will depend on nature of deposit found within indicated boundaries. Fuel tank and storage shed will remain in locations shown on Map CHQ 105.2 for life of mine. Light contours indicate topography existing as of August 2008, including 2007-2008 mining. Heavy contours indicate approximate post-reclamation topography (5-ft contour interval). No established drainages are affected in New Mining Area. Truck turnaround area will move south with mining, areas will be reclaimed as above.

(b) Boundary of portion of New Mining Area to be reclaimed under this application, acreage to be disturbed, and acreage to be reclaimed. NOTE: exact acreages will depend on nature of deposit found as mining proceeds.

(c) Areas disturbed by the operation which are included in a request for a variance from the reclamation standards, see 105.3(d).

(d) Depending on location-specific natural slopes of the west side of the ridge that forms the eastern boundary of the New Mining Area, segments of slopes up to 25 vertical feet high exceeding 3h:1v may be left to blend into the natural slopes above. Approximate areas where these slopes may occur are indicated by close contours along the eastern boundary.

III. Rule R647-4-106 - Operation Plan

106.1 - Mineral to be mined: Gypsum, $CaSO_4 \cdot 2H_2O$

106.2 - Description of operation: This application is intended to permit a larger area for continued operation of the existing Chalk Hills Quarry. It is the intent of this application to describe operations proposed on a 12.578-acre addition to the existing 4.95-acre permit area (Permit No. S150095) in detail, with a total permit area of 155 acres. Total acreage to be mined within this 155-acre area is undetermined at this time and will depend on the nature of the deposit. Neither increased production nor change in mining methods are contemplated by this application.

Address: 1720 South Red Hills Rd.
City, State, Zip: Richfield, UT 84701
Phone: 435-896-8870 Fax: 435-896-8893
Emergency, Weekend, or Holiday Phone: 435-979-4316
E-mail Address: Karen@diamondkgypsum.com

5. **Location of Operation:**
Emery County, 30 miles northeast of Emery and 27 miles south-southwest of Price
SW 1/4 of SW 1/4, Section 23, Township 19 South, Range 10 East, Salt Lake P.M.
NW 1/4 of Section 26, Township 19 South, Range 10 East
NE 1/4 of Section 27, Township 19 South, Range 10 East

6. **Ownership of the land surface:**
Bureau of Land Management (public domain)
Address: Price Field Office, P.O. Box 7004, Price, UT 84501

7. **Owners) of record of the minerals to be mined:**
Bureau of Land Management (public domain)
Address: Price Field Office, P.O. Box 7004, Price, UT 84501

8. **Bureau of Land Management (BLM) Project File Number(s):** UTU-79585

BLM Claim Numbers: UMC384066, UMC384067, UMC384068, UMC384069, UMC384074, UMC384075, UMC384084

9. **Adjacent land owners:**
Bureau of Land Management
Address: Price Field Office, P.O. Box 7004 Price, UT 84501

10. **Have the land, mineral and adjacent land owners been notified in writing?** Yes

11. **Does the Permittee/Operator have legal right to enter and conduct mining operations on the land covered by this notice?** Yes

II. Rule R647-4.105 - Maps, drawings & Photographs

105.1 - Base Map

Map No. CHQ-105.1: Chalk Hills Quarry Base Map
USGS Buckhorn Reservoir 7.5' quadrangle, 1969 (photoinspected 1978)
Contour interval 40 ft, scale 1" ≈ 2,000'

The map includes:

(a) Property boundaries of surface ownership of all lands which are to be affected by the mining operations
(b) Perennial (none), intermittent (none), or ephemeral streams, springs (none) and other bodies of water, roads, buildings (none), landing strips (none), electrical transmission lines (none), water wells (none), oil and gas pipelines (none), existing wells or boreholes, or other existing surface or subsurface facilities within 500 feet of the proposed mining operations
(c) Proposed route of access to the mining operations from nearest publicly maintained highway
(d) Known areas which have been previously impacted by mining or exploration activities within the proposed land affected
(e) Areas proposed to be disturbed or reclaimed over the life of the project or other suitable time period

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105.2 - Surface Facilities Maps

Map No. CHQ-105.2: Chalk Hills Quarry New Mining Area Surface Facilities Map
Diamond K Gypsum Mining Plan, August, 2008, Scale 1" = 200'

The map includes:

(a) Existing Chalk Hills Quarry surface facilities, which will not be moved and which constitute all proposed surface facilities; and County Road 405, existing primary quarry access road, and approximate location of life-of-mine haul road.
(b) Borders of existing quarry, 4.95 acres, and the proposed new mining area, 12.58 acres. See Map 105.2a for total area to be disturbed including future mining area.
(c) Approximate locations of test pits.

Map No. CHQ-105.2a: Chalk Hills Quarry Future Mining Area Surface Facilities Map
Diamond K Gypsum Mining Plan, August, 2008, Contour interval 5 ft.,
Scale 1" = 500'

The map includes:

(a) Existing Chalk Hills Quarry surface facilities, see Map CHQ-105.2 for details; and County Road 405, existing primary quarry access road, and approximate location of life-of-mine haul road.

Topsoil, if any, is removed and stockpiled for reclamation. Weathered gypsum and surface gypsum contaminated with windblown silt is also stockpiled for reclamation. This work is contracted and equipment is determined by the contractor. Material for reclamation will be stockpiled along the west side of the quarry as mining proceeds south, then used for ongoing reclamation starting at the north end.

Mining is by Caterpillar Model RR250 diesel-hydraulic reclaimer, which grinds the gypsum and stacks it in low windrows on the quarry floor. The windrows are then pushed into storage piles by a Caterpillar Model 950F front-end loader. The loader also fills trucks for haulage of the mined material to the existing mill in Richfield. A 19 ft x 8 ft x 8'4" tool and parts trailer, a 10'2" x 4'4" x 5' 1,000-gallon fuel tank in a neoprene-lined and bermed 2,000-gallon containment area, and a commercial portable toilet are also located on-site, near the gypsum stockpile at the entrance to the quarry (see Map CHQ-105.2). Other equipment which is needed for specific purposes such as access road construction, topsoil removal, and reclamation is moved in from other locations or contracted on a temporary basis and removed from the site upon completion of the specific project. The access road is be gated and locked when the quarry is unattended.

After mining moves south from the existing pit into the Year 1 pit of the new mining area, reclamation of the western portion of the existing (original) pit will begin. A combination of grading of the pit floor and spreading and compacting of weathered gypsum will be used to reconstruct general original contour, topsoil spread over the compacted material, and the area seeded with the approved seed mixture.

106.3 - Estimated Acreage:

Area of actual mining (see Maps CHQ-105.2 and CHQ-105.3):	
New mining area:	12.58 acres
Future mining area:	49.70 acres
Potential mining area (over-burden removal required):[1]	40.29 acres
Area of topsoil and weathered gypsum storage:	Variable, nominally 0.15 acres
Area of mixed waste gypsum and interburden shale:	Variable, nominally 0.10 acres
Area of product stockpile:	Variable, nominally 0.15 acres
Area of access/haul roads:	0.25 acres expanding to total of 1.0 acres to south boundary of new mining area, total of 2.5 acres from County Road 405 to south boundary of future mining area[2]

[1] West of future mining area only.

[2] Does not include in-pit roads that are part of active mining areas.

Area of on-site processing facilities, tailings disposal:	None
Total acreage: all disturbances except initial access road are within active mining areas:	

Existing quarry:	4.95 acres incl. access road
New mining area:	12.58 acres
Subtotal:	17.53 acres
Future mining area:	49.70 acres
Total:	67.29 acres

106.4 - Nature of Material, Including Waste Rock/Overburden and Estimated Tonnage

Overburden, ore, and waste rock: topsoil and weathered gypsum ("gypsite") constitute the only overburden to be removed.

Topsoil in the area affected by this application is mapped entirely as the Mussentuchit-Goblin-Robroost association, 3% to 20% slopes.[3] These soils are developed on exposed gypsum and highly-gypsiferous rocks, and contain from 35% to 60% gypsum. Soil testing locations are shown on map CHQ-106.5a and analytical results are attached as Appendix B. Topsoil thicknesses range from 0 to mostly less than 12".

Subsoil consists of weathered gypsum, which in turn contains small and variable amounts of Mussentuchit-Goblin-Robroost association soil as well as windblown silt. Thickness varies from a few inches to mostly less than 12".

Waste rock consists of gypsiferous and occasionally calcareous shale and siltstone lenses contained within the gypsum bed. The clastic rocks consist of typical silicate minerals as well as free silica (quartz).

Ore consists of gypsum ranging from 95% to nearly 100% calcium sulfate dihydrate, $CaSO_4 \cdot 2H_2O$. Thickness varies from 5 ft to 25 ft, including lenses of waste rock. The gypsum bed is contained in the upper part of the Carmel Formation of Upper Jurassic age. Exposures indicate a continuous deposit dipping generally northwest. Chemical analyses performed by an independent, accredited laboratory of two hand samples collected from Wedge #23-19, as well as in-house tests conducted on full-thickness samples collected from four track-excavator trenches at the corners of the current quarry, plus a sample from a hand-shoveled hole in the center of the quarry pad, show that unweathered samples average 97.7% $CaSO_4 \cdot 2H_2O$, partially-weathered samples 89.0%, for an overall unweighted average of 95.2%. Gypsum of the Carmel Formation is thought to have been deposited in a series of lagoons along the eastern margin of a shallow, warm epicontinental sea. Restricted circulation in the lagoons resulted in hypersaline

[3] http://websoilsurvey.nrcs.usda.gov/app/

conditions and deposition of calcium carbonate, calcium sulfate, and in some limited areas sodium chloride. A combination of lenticular deposition, soft-sediment and diagenetic contortion, and tectonic deformation during and since the Laramide orogeny has produced the erratic distribution and rapid thickness changes found in the gypsum beds of the Carmel in the region today.

Thickness of overburden:	0 to 4 ft, average about 1 ft
Thickness of mineral deposit:	5 ft to 25 ft, average about 15 ft
Estimated annual volume of overburden:	3,500 yds^3
Estimated annual volume of reject materials:	400 yds^2
Estimated annual volume of ore mined:	34,000 yds^3

106.5 - Existing Soil Types, Location of Plant Growth Material

The National Resources Conservation Service (NRCS) maps the entire area to be disturbed under this application as Type No. 447, the Mussentuchit-Goblin-Robroost association, 3% to 20% slopes. Adjacent soils are Type 443, Robroost-Mussentuchit association, 2% to 12% slopes. The NRCS soil survey for the general project area is included, with map, explanations and soil association descriptions, as Appendix A.

Map CHQ-106.5 is as obtained from the NRCS website, with the boundary between Type 447 and Type 443, Robroost-Mussentuchit association emphasized within the Current and New Mining Areas for readability. This boundary, which marks the contact between top of the gypsum bed and overlying shale and siltstone on the west side of the project area, has been remapped using a combination of field examination and both higher-resolution black and white and color airphotos. The revised boundary, also shown on Map CHQ-106.5, forms the western boundaries of the New and Future Mining Areas. While neither the NRCS nor the revised boundary is completely accurate, it is Diamond K's intention to limit gypsum mining to those areas where overburden removal is not required, and therefore except for the existing permitted access road which crosses approximately 385 ft of Type 443 soil only Type 447 is to be disturbed.

Map CHQ-106.5: Chalk Hills Quarry NRCS Soil Type Map, Scale 1" = 850'

The map includes:

(a) Project area, current quarry, New Mining Area, and Future Mining Area boundaries.
(b) NRCS boundaries between the soil types in the project area, thin orange lines; boundary between Types 443 and 447 in proposed disturbed areas has been thickened for visibility. See also Appendix A.
(c) Revised boundary between Types 443 and 447 along western side where it coincides with probable limit of exposed gypsum bed, thick dashed line.

(a) Field analysis of Type 447 soil:
Depth of soil material: 0 to ±20 inches
Volume (estimated, based on average of 15"): 25,370 cubic yards
Texture: loamy sand (confirmed by laboratory description - "Upper" sample)
pH: average 7.14 (laboratory tests only)

(b) Laboratory Analyses:
Six soil samples have been taken in accordance with DOGM procedures, five of Type 447 and one of Type 443. Three of the Type 447 samples are from the New Mining Area and two from the Future Mining Area. The Type 443 sample is from just south of existing permitted access road. The sample locations are given on map CHQ-106.5a. The samples were analyzed by the Soil and Plant Analysis Laboratory at Brigham Young University. Analysis results are given in Appendix B.

Map CHQ-106.5a: Chalk Hills Quarry Soil Sample Location Map, Scale 1" = 500'

The map includes:
(a) Project area, current quarry and New Mining Area boundaries.
(b) Locations of Chesler series and Upper/Lower soil samples.

106.6 - Plan for Protecting and Redepositing Existing Soils

Note: The microtopography of the project area is chaotic – see photographs in Appendix E. As a result, thicknesses and volumes are averages, and specific areas of soil as opposed to weathered gypsum have not been mapped.

Thickness of soil material to be salvaged and stockpiled: 0 to ±20 inches
Area from which soil material can be salvaged: 12.58 acres (entire area)
Volume of soil to be stockpiled: 25,370 cu. yds.

Topsoil and subsoil will be removed by bulldozer, front-end loader, or both. Stockpiling is by pushing or dumping as appropriate in a pile separate from waste gypsum and interburden shale. As reclamation will be ongoing, with new piles constructed as previous piles are used for reclamation, no protective measures such as wind fencing or interim seeding are contemplated. See the Storm Water Pollution Protection Plan, Appendix F, for runoff protection measures.

106.7 - Existing vegetative communities to establish revegetation success

The 12.58-acre New Mining Area and the 49.70-acre Future Mining Area were subjected to a quantitative vegetation inventory on July 9, 2008. The inventory was performed by Ronald J. Kass, Ph.D., botanist, Intermountain Ecosystems, LLC. His report is attached as Appendix C. Table 2 is the table from Dr. Kass's report.

TABLE 2 – QUANTITATIVE VEGETATION INVENTORY			
COMMON NAME	SCIENTIFIC NAME	PLANT TYPE	PERCENT COVER
Winterfat	*Ceratoides lanata*	shrub	4.1
Shadscale	*Atriplex confertifolia*	shrub	1.2
Sand dropseed	*Sporobolus cryptandrus*	grass	2.0
Purple threeawn	*Aristida purpureus*	grass	2.0
Snakeweed	*Xanthrocephalum sarothorae*	shrub	0.84
Castle Valley saltbush	*Atriplex nuttallii* var *cuneata*	shrub	0.65
Galleta grass	*Hilaria jamesii*	grass	0.75
Yellow crypthantha	*Crypthantha flava*	forb	0.75
Total Vegetative Cover			**12.29**

Methodology utilized by Dr. Kass is included in Appendix C. His conclusions may be summarized as follows:

Ground cover, %:	12.29
Litter, %:	11.50
Rock and rock fragments, %:	27.10
Bare ground, %:	49.20

Revegetation requirement (70% of ground cover): 8.60%

Photographs illustrating vegetative cover and general appearance of the entire 155-acre area (see Map CHQ 105.2a) are included in Appendix D.

106.8 - Depth to Groundwater, Overburden Material & Geologic Setting

(a) **Depth to Groundwater:** There are no monitoring or water wells in the immediate vicinity of the project area. Division of Oil, Gas & Mining records indicate two authorizations to drill in the area of Map CHQ 105.1, both just south and a little east of the center of sec. 23, T. 19 S., R. 10 E., near Cloyds Pond, 0.65 miles northwest of the center of the New Mining Area. The wells are the Cole #1, U33967, and Bush #1, with the same initial serial number. From the very sparse documentation for both wells it appears that Bush #1 was drilled to a depth of 1,560 ft, plugged, and abandoned in early 1977. It does not appear that the Cole #1 well approved in late 1977, was drilled. The Bush #1 well, with a new serial number of U56040 and an API number of 43-015-30237, was reentered to a depth of 1,500 ft but abandoned again in late 1989. The operator reported on DOGM Form 7 that a "trace" of water was

encountered in the Navajo Sandstone at between 200 to 210 ft; otherwise the hole was reported as dry.

The Buckhorn well is located 2.11 miles north-northwest of the center of the New Mining Area and outside of the area shown in Map CHQ 105.1. No data has been found regarding water levels, water quality, or capacity of this well.

The Utah Geological Survey well and spring database[4] does not record any wells or springs in the immediate vicinity of the project. Depth to groundwater is unknown but is likely greater than 150 ft.

(b) **Overburden Material:** Diamond K does not propose to remove overburden other than topsoil and weathered gypsum, see §106.5.

(c) **Geologic Setting:** The Chalk Hills Quarry is located in Jurassic rocks exposed around the flanks of the San Rafael Swell, a physiographic significant uplift that is part of the larger San Rafael anticline. The anticline is strongly asymmetrical, with the thick sequence of sedimentary rock that forms bedrock on the Swell folded to near-vertical along the eastern margin, forming the dramatic serrated ridge known as the San Rafael Reef, while dips of 10° or less form broad westerly-dipping slopes on the west side. Dip on the project area is a relatively-uniform 2° to the northwest except in and immediately adjacent to contorted gypsum beds. The fold is the result of either a large shallow intrusive or the reactivation of older faults in the subsurface, in either case during the late Laramide orogeny from middle Eocene to late Paleocene, 40 to 60 million years ago (mya). There is some evidence that uplift may have begun as early the Late Cretaceous and lasted into the Oligocene (Witkind, 1988[5]). Sedimentary rocks originally deposited in the area of what is now the San Rafael Swell range in age from Permian, 290 to 248 mya, to at least early Paleocene, 65 to 61 mya, although all rocks younger than Jurassic, 206 to 144 mya, have been eroded from the swell itself.

Rocks on and in the immediate vicinity of the Diamond K Gypsum Chalk Hills claims consist of the Carmel Formation, of Middle Jurassic age (roughly 190 to 169 mya). On the claims themselves, exposures are limited to the highest beds of the lower member of the Carmel Formation and the upper gypsum-bearing member. These two units can be described as follows (modified from Witkind, 1988, and Doelling, 2002[6]):

[4] http://geology.utah.gov/emp/geothermal/wells_springs_database.htm

[5] Witkind, I.J., 1988, Geology of the Huntington 30' x 60' quadrangle, Carbon, Emery, Grand, and Uintah Counties, Utah: U.S. Geological Survey Miscellaneous Investigations Series Map I-1764.

[6] Doelling, H.H., 2002, Interim geologic make of the San Rafael Desert 30' x 60' quadrangle, Emery and Grand Counties, Utah: Utah Geological Survey Open File Report 404.

Upper member: Also known as the Winsor Member. Reddish-brown to greenish-gray thin-bedded siltstone with a few thin sandstone beds in upper part, interbedded with gypsum beds from 2 ft to 5 ft thick, locally coalescing to form beds up to 25 ft thick, mostly in middle portion; forms broad, intricately-dissected slopes. About 250 ft thick.

Lower member: Also known as the Paria River Member. Light-gray to brownish-gray, locally pale green, thin-bedded dense limestone. In places passes laterally into a very fine-grained calcareous sandstone. Ripple marks, raindrop pits, and other sedimentary features indicate shallow-water deposition. 30 to 50 ft thick.

On the Diamond K claims the gypsum deposit consists of a single bed 8 to 25 and possibly as much as 30 ft thick. Thin lenticular splits of silty shale and shaly siltstone are present erratically throughout the deposit, and are separated as "interburden shale" (§106.3). Thickness variations in the New and Future Mining Areas, where average thickness is estimated at a minimum of 10 ft, are due primarily to erosion.

106.9 - Location and size of ore and waste stockpiles, tailings and treatment ponds, and discharges

(a) **Describe the location and size of any proposed waste/overburden dumps, stockpiles, tailings facilities and water storage or treatment ponds.**
No waste/overburden dumps, stockpiles, tailings facilities or water storage or treatment ponds are contemplated.

(b) **Describe how overburden material will be removed and stockpiled.**
Other than topsoil, interburden shale, and waste gypsum as described in §§ 106.4, 5, and 6, removal and stockpiling of overburden are not contemplated.

(c) **Describe how tailings, waste rock, rejected materials, etc. will be disposed of.**
No tailings will be produced. Waste rock (interburden shale) and rejected materials (waste gypsum) will be stockpiled temporarily as described (§§ 106.2 and 106.4) and illustrated (Map CHQ-105.2) above.

(d) **Describe the acreage and capacity of waste dumps, tailings ponds and water storage ponds to be constructed.**
No waste dumps, tailings ponds, or water storage ponds are contemplated.

(e) **Describe any proposed effluent discharge points (UPDES) and show their location on the surface facilities map.**
No effluent discharge points are contemplated.

IV. Rule R647.4-107 - Operational Practices

Diamond K Gypsum, Inc., shall conform to this section of the Minerals Rules unless it requests and is granted a variance in writing from the Division.

V, Rule R647-108 -Hole Plugging Requirements

No drilling that will not be consumed in mining is contemplated.

VI. Rule R3647.109 - Impact Statement

109.1 - Surface and groundwater systems

(a) **Describe impacts to surface or groundwater which could be caused by this mining operation.**
There are no surface water resources on or in the immediate vicinity of the project area. The "headwaters" of an ephemeral dry wash will be disturbed by the operation. This wash empties into Fuller Bottom Draw another ephemeral drainage, 1.9 miles northwest of the project area. Fuller Bottom Draw joins the San Rafael River 4.0 miles southwest of this confluence.[7] Impact to surface runoff will be limited to increase in suspended solids. For further discussion and control measures, see Appendix E.

The lower part of the upper member and the lower member of the Carmel Formation, with an estimated total thickness of about 150 ft, which immediately underlies the gypsum bed, is described in DOGM documentation regarding the Bush #1 well, 0.65 miles northwest of the center of the New Mining Area, as an aquiclude. No significant water was encountered in this well to its total depth of 1,578 ft. Therefore no impact on groundwater is anticipated.

(b) **Describe how these impacts will be monitored and mitigated.**
See the Storm Water Pollution Protection Plan and Notice of Intent, Appendix F, for description of runoff control measures.

109.2 - Wildlife habitat and endangered species

(a) **Describe the impacts on wildlife habitat associated with this operation.**
There are no surface water resources on or in the immediate vicinity of the project area. With an average vegetative cover of all species of 12.29%, there is insufficient forage to attract wildlife. Therefore impact on wildlife habitat is expected to be insignificant.

[7] Distances are straight-line.

(b) **Describe any impacts to big game species found in the area.**
There are no surface water resources on or in the immediate vicinity of the project area. With an average vegetative cover of all species of 12.29%, there is insufficient forage to attract big game species. Therefore impact on big game species is expected to be insignificant.

(c) **Describe any impacts to riparian areas.**
There are no riparian areas on or in the immediate vicinity of the project area.

(d) **Describe any impacts this operation will have on waterfowl (fly-over, temporary resident or permanent resident).**
There are no surface or near-surface water or food resources or nesting areas on or in the immediate vicinity of the project area. There are no known temporary or permanent resident waterfowl on or in the immediate vicinity of the project area. Therefore impact on waterfowl (fly-over, temporary resident or permanent resident) is expected to be insignificant.

(e) **List any threatened or endangered wildlife species found in the area.**
The entire project area has been examined for threatened and endangered species, see Appendix D. No evidence of threatened or endangered species were found.

(f) **Describe impacts to threatened or endangered species and their habitats.**
There is no evidence of threatened or endangered species of wildlife in the project area, and therefore impacts to threatened or endangered species and their habitats are expected to be insignificant.

(g) **Describe measures to be taken to minimize or mitigate any impacts to wildlife or endangered species.**
No impacts on wildlife or threatened or endangered species are anticipated.

109.3 - Existing soil and plant resources

(a) **Describe impacts to the existing soil and plant resources in the area to be affected by mining operations.**
Existing soil and plant resources will be removed and mixed soil and vegetation utilized for ongoing and final reclamation, see §§ 106.2, 4, 5, and 7.

(b) **Describe impacts to riparian or wetland areas which will be affected by mining.**
No riparian or wetland areas will be affected by mining.

(c) **Describe impacts to threatened or endangered plant species.**
The entire project area has been inventoried for threatened or endangered plant species, including the San Rafael cactus, *Pediocactus despainii,* see Appendix D, and no threatened or endangered plant species were found. Therefore no impacts to threatened or endangered plant species are anticipated.

(d) **Describe measures to be taken to minimize or mitigate any impacts to soil and plant resources.**
Soils will be removed and stockpiled for redistribution during ongoing and final reclamation, see § 106.4, 5, and 6. Reclaimed land will be reseeded in accordance with requirements of the Bureau of Land Management, see § 105.3, in accordance with revegetation requirements, see § 106.7.

109.4 - Slope stability, erosion control, air quality, public health & safety

(a) **Describe the impacts this mining operation will have on slope stability and measures taken to minimize or mitigate impacts to slope stability.**
There are no unstable natural slopes in the project area. The mining method to be employed does not create unstable slopes, Reclaimed slopes will approximate original contours, approximately match undisturbed adjacent natural slopes, or not exceed 3h:1v, whichever is less.

(b) **Describe the impacts this mining operation will have on erosion and measures taken to minimize or mitigate impacts to erosion.**
While gypsum is an easily-erodable material, its presence at the surface is evidence of the dry climate that has and will continue to minimize erosion in the project area. Erodability of gypsum will not increase as a result of mining operations. Siltstone found beneath the gypsum bed is less erodable than the material being removed. Erosion of materials replaced during reclamation will be minimized by final grading parallel to contour and revegetation.

(c) **Describe the impacts this mining operation will have on air quality and measures taken to minimize or mitigate impacts to air quality.**
Air quality would be affected by exhaust fumes from mining equipment and haul trucks and by fugitive dust generated by mining as well as product loading and haulage off-site. During normal mining operations, two diesel-powered machines, a reclaimer and a front-end loader, would be used. At a production rate of 60,000 tons per year, a maximum of ten 40-ton semi loads per day would be hauled from the quarry to the mill in Richfield. Exhaust emissions due to haulage would thus be transient, amounting to only seconds per day at any given location. Slightly-elevated airborne emission levels could occur within the quarry during actual mining and loading operations. Such emissions would be localized and would dissipate quickly when equipment is shut down. The quarry qualifies as a minor source since it would emit less than 100 tons annually.

Milling components of the reclaimer are fully-enclosed and as a result the mining operation would produce very little fugitive dust. Stockpiling and haul-truck loading would produce minor amounts of coarse gypsum dust which would settle quickly. Small amounts of fine dust, produced mostly by equipment operations on the gypsum floor of the quarry, raised during occasional periods of high winds, would dissipate rapidly. Dust emissions on the access road from the quarry to the county road would be controlled by magnesium chloride solution application as needed. Emery County routinely treats all unpaved public roads that would be used for truck haulage from the site. Diamond K would participate in county road maintenance as may result from increased traffic levels attributed to the quarry, in accordance with the required Annual Haul Permit, which would define alternate routes and road-condition restrictions, if any. Loaded haul truck would be covered to prevent in-transit fugitive dust as well as to minimize product loss.

(c) **Describe the impacts this mining operation will have on public safety and measures taken to minimize or mitigate impacts to public safety.**
The project area is in an isolated area, the operating area is not readily visible from public roads, neither explosives nor hazardous materials other than diesel fuel are stored or used at the site, the mine access road is gated and locked when the site is unattended, and as a result the proposed operation presents minimal hazard to public safety. Typical off-site product haulage would utilize 40-ton semi tractor-trailers. At the projected production rate, no more than ten round trips (20 total trucks) between the quarry and the Diamond K Gypsum's mill near Richfield per day are anticipated. Two quarry employees and an average of one additional service/visitor round trips would add an additional three round trips (6 total vehicles) for a total of 13 round trips per day (26 total vehicles), or 3.25 additional vehicles per hour during a single 8-hr shift. No road improvements are anticipated by Diamond K or Emery County for this minimal increase in traffic, which would be governed by the terms and conditions of annual haul permits issued by Emery County. Two routes would be permitted by Emery County to Utah Highway 10: EM405 to EM401 to U10 just north of Castle Dale, and EM405 to EM332 to EM325 to UI0 just south of Huntington. Haulage would then be southwest on U10 to I-70, and west-southwest on I-70 to Richfield. County road use during adverse weather would be subject to the stipulations in the Emery County permit. Current traffic levels on these roads is unknown but are estimated at less than 100 vehicles per day except for a few heavy-use spring and fall weekends (EM332, EM401, and EM405; Emery County Road Department personal communication). Estimates of road capacity range from approximately 400 vehicle trips per day for the segment including the curving approach to Huntington Creek (EM401) to 800 trips/day on some of the wider straight segments of all roads involved; an overall average

estimate of 600 trips/day is assumed (see Wyckoff, *et al.*, 2003[8]). Therefore off-site product transportation will have minimal impact on public safety.

VII. Rule R647-4-110 RECLAMATION PLAN

110.1 - Current land use and postmining land use.

(a) **Current or premining land use(s) other than mining.**
The project area is unrestricted public (BLM) land and is part of the Buckhorn grazing allotment.

(b) **Proposed postmining land use(s):**
Unrestricted public land and grazing.

110.2 - Reclamation of roads, highwalls, slopes, leach pads, dumps, etc.

(a) **Describe how the following features will be reclaimed: roads, highwalls, slopes, impoundments, drainages and natural drainage patterns, pits, ponds, dumps, shafts, adits, drill holes and leach pads.**
The haul road as extended south with quarry advance will be reclaimed upon completion of mining by ripping to a minimum depth of 6", covered with mixed interburden shale and waste gypsum and topsoil in proportion to available material (see §§ 106.3 though 7).

No highwalls exceeding 45° or slopes exceeding 3h:1v will be left except at the base of natural slopes exceeding 3h:1v along the west side of the ridge which forms the boundary of the east side of the mining area, where the pit margin will be sloped to blend into the natural slopes above. Exposed gypsum in these slopes will be left to weather into the existing landscape.

The only significant slopes to be affected are those at the east margin of the quarry against which will be the "highwalls" discussed in the previous paragraph.

The existing ephemeral drainage pattern will be roughly reestablished by way of grading to approximate original contour during ongoing and final reclamation.

No impoundments, pits, ponds, dumps, shafts, adits, drill holes and leach pads are anticipated in the project area.

(b) **Describe the configuration of these features after final reclamation.**

[8] Wyckoff, M. and M. Manning, 2003, A guidebook on using impervious surface and gravel road capacity analysis to manage growth in rural and suburban communities: Planning and Zoning Center, Lansing, MI, and Huron River Watershed Council, Ann Arbor, MI, 71 pages.

Mined areas will be graded to approximate original contour during ongoing and final reclamation.

No structures, impoundments, pits, or ponds will be left upon final reclamation.

Final grading to approximate original contour will restore the major components of the existing drainage system, which consists of generally chaotic components mostly cut to shale bedrock beneath the gypsum bed and will be reclaimed to generally westerly-sloping slopes as shown on Map CHQ 105.3.

No waste dumps, shafts, adits, drill holes, tailings areas, or leach pads, will be established during mining and therefore none will require reclamation.

All highwalls and slopes will be restored to approximate original contour. Variances will be requested in writing should natural slopes into which highwalls are to be blended exceed 3h:1v. Pit benches exceeding 35 feet in width will be contoured for drainage, covered with interburden shale and waste gypsum, topsoiled in accordance with BLM recommendations , and revegetated,

Any stockpiled materials remaining at the site at the time of final reclamation will be removed if salable or utilized in reclamation.

110.3 - Surface facilities to be left

No surface facilities will be left at the site.

110.4 - Treatment, location and disposition of deleterious materials

(a) **Describe the nature and extent of any deleterious or acid forming materials located on-site. Describe how these materials will be neutralized, removed, or disposed of on site.**
No deleterious or acid-forming materials will be used or exposed in the mining process.

(b) **Describe how buildings, foundations, trash and other waste materials will be disposed of.**
The only buildings at the site are a storage shed and a commercial toilet which will be removed by truck. No foundations are contemplated. Trash and other waste materials are routinely removed as necessary and upon completion of final reclamation any remaining trash or other waste materials will be removed in an appropriate manner.

110.5 - Revegetation planting program and topsoil redistribution

(a) **Describe the revegetation tasks to be performed in detail.**
As pit areas of 3 to 5 acres are depleted of minable gypsum, pit floors will be ripped to a minimum depth of 4" with an appropriately-sized ripper-equipped bulldozer or motor grader. Except in channels of drainages a minimum of 12" of interburden shale and waste gypsum will be spread and graded to approximate original contour by wheeled front-end loader or grader. A minimum of 4" of topsoil, depending on availability, will be spread over the contoured material by wheeled loader, distributed by grader, lightly disced with appropriate equipment parallel to contouring to maximize moisture retention, and reseeded, all in accordance with BLM recommendations. All areas shown as disturbed on Map CHQ 105.3 will be revegetated in accordance with this part; see also §§ 105.3 and 106.7

(b) **Soil material replacement**
(1) Describe the volume of soils and approximate depth of soil cover to be used in reclamation.
See §§ 106.3, 4, 5, and §110.5(a).
(2) **Describe the source of these soils and provide an agronomic analysis of the soils.**
See §§ 106.4, 5, and 6, Map CHQ 106.5, Appendix A, and Appendix B
(3) **Describe the methods used to transport and place soils.**
See §110.5(a).

(c) **Seed bed preparation**
(1) **Describe how the seedbed will be prepared and equipment to be used.**
See §110,5(a).
(d) **Seed mixture - List the species to be seeded.**
See §105.3, Table 1.
(e) **Seeding method**
Seeding method will be in accordance with BLM recommendations.
(f) **Fertilization**
Fertilization methods, types, and application rates will be in accordance with Appendix B and BLM recommendations.
(g) **Other revegetation procedures**
Other revegetation procedures shall be in accordance with BLM recommendations.

V111. Rule R647.4-112 VARIANCE

1.11 Diamond K Gypsum, Inc., requests a variance from Rule R647-4-111(7), Highwalls - In surface mining and in open cuts for pads or roadways,

highwalls shall be reclaimed and stabilized by backfilling against them or by cutting the wall back to achieve a slope angle of 45 degrees or less.

1.12 A north-south-trending ridge, much of it capped by shaly siltstone of the upper member of the Carmel Formation overlying the gypsum bed, forms the eastern boundary of the current quarry area, the New Mining Area, and the Future Mining Area. Diamond K proposes to mine east to this ridge as far as practicable and leave a "highwall" in the form of a slope that blends into the natural slope of the ridge. For the most part these slopes are less than 45° but in some places exceed this angle. As the thickness of the gypsum bed is both a factor in the exact locations where Diamond K may wish to leave gypsum slopes exceeding 45° and unknown at those locations, precise locations cannot be identified at this time. The areas where such slopes may occur are indicated on Map CHQ-105.3.

1.13 The variance is requested to allow more visual continuity between the reclaimed mine area and the natural slopes of the ridge upon final reclamation. Not having to use interburden shale, waste gypsum, and topsoil to fill in against the "highwall," which will have a maximum height of about 25 ft and a maximum angle of about 65°, while provide more of these materials for reclamation elsewhere.

1.14 Exposed gypsum will be left as-is in these steep-slope areas. Gypsum is stable in the desert climate (less than 7" precipitation per year) and will weather slowly to blend into the natural landscape. Loose gypsum will be scaled during final reclamation and left at the base of the slope. Reclamation as described in §§110.2 and 5 as well as elsewhere above will be extended to the base of the slopes, and final contour grading will tie slope-bottom drainage into the final drainage system.

<u>GENERAL STATEMENT:</u> The proposed operations are subject to review by the U.S. Department of the Interior Bureau of Land Management. It is likely that a revised Chalk Hills Quarry Environmental Assessment will be required. Stipulations and other requirements of the resulting document may differ from the contents of this application. Diamond K Gypsum will advise the Division of any such stipulations and other requirements in a timely manner and provide modifications to this application as may be necessary.

IX, Rule R647-4-113 - SURETY

A Reclamation surety must be provided to the Division prior to final approval of this application. In calculating this amount, include the following major tasks:

1) Clean-up and removal of structures,
2) Backfilling, grading and contouring.
3) Soil material redistribution and stabilization.
4) Revegetation (preparation, seeding, mulching).
5) Safety gates, berms, barriers, signs, etc.
6) Demolition, removal or burial of facilities/structures, regrading/ripping of facilities areas.
7) Regrading, ripping of waste dump tops and slopes,
8) Regrading/ripping stockpiles, pads and other compacted areas.
9) Ripping pit floors and access roads.
10) Drainage reconstruction.
11) Mulching, fertilizing and seeding the affected areas.
12) General site clean up and removal of trash and debris,
13) Removal/disposal of hazardous materials.
14) Equipment mobilization.
15) Supervision during reclamation.

Third-party contractor estimate for final reclamation as follows (does not include ongoing reclamation):

1:	$ 1,000
2, 3 as combined tasks:	$48,000
4:	$ 3,000
5: not applicable	
6: not applicable	
7: not applicable	
8: included in #2	
9: included in #2	
10:	$10,000
11: same as #4*	
12: as needed	
13:	$ 500
14: included in #1	
15:	$ 1,000
TOTAL	$56,000

Estimate is attached as Appendix E.

XI. Signature Requirement

I hereby certify that the foregoing is true and correct. (**NOTE:** This form must be signed by the owner or officer of the company/corporation who is authorized to bind the company/corporation).

Signature of Permittee/Operator/Applicant: Karen Palmer

Name: Karen Palmer 11.26.08

Title/Position: President

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides for maintenance of confidentiality concerning certain portions of this report. Please check to see that any information desired to be held confidential is so labeled and included on separate sheets or maps.

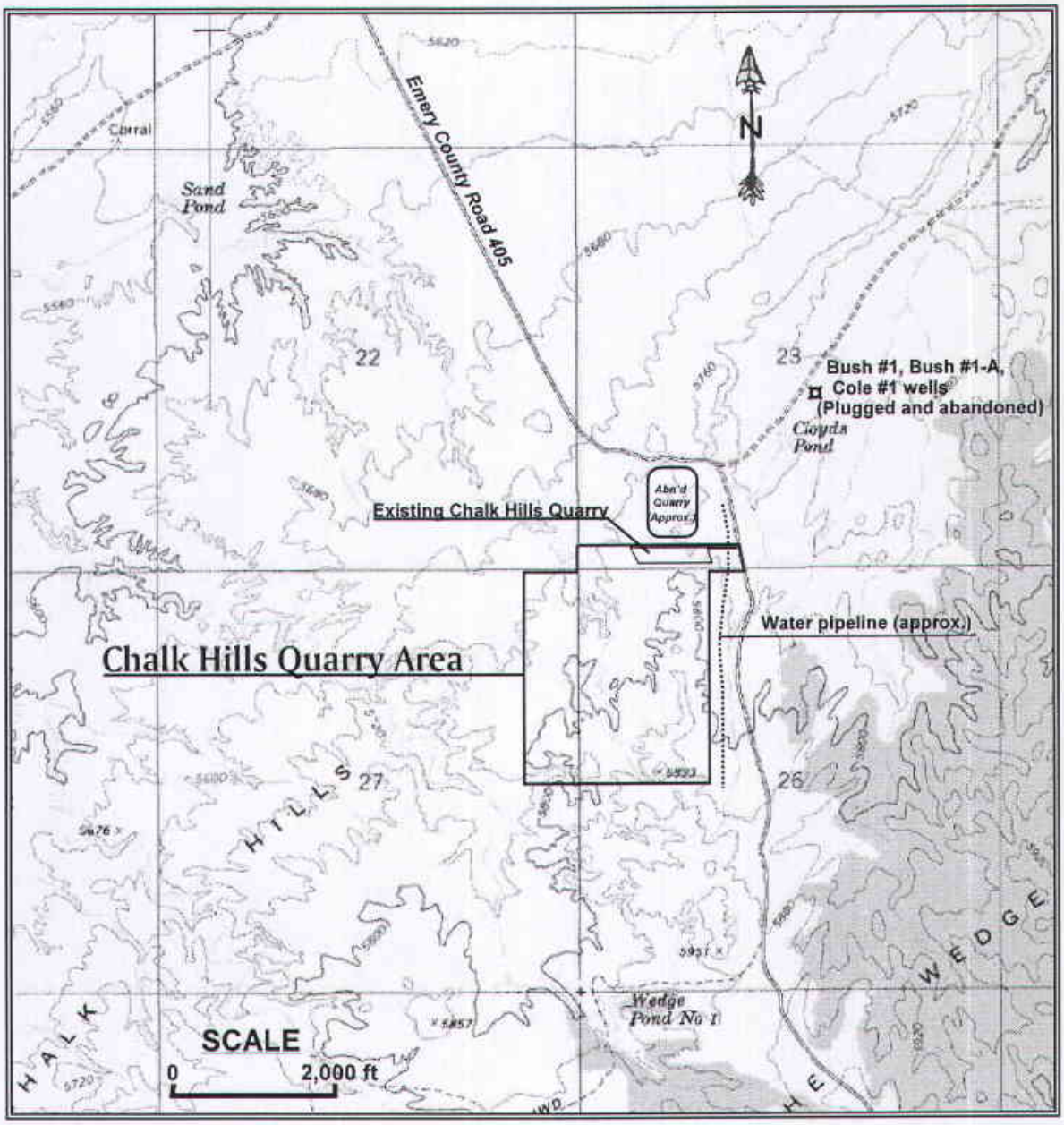
Only information relating to the location, size or nature of the deposit may be protected as confidential.

Confidential Information Enclosed: ( ) Yes ( ) No

APPROVED

DIV. OIL, GAS & MINING

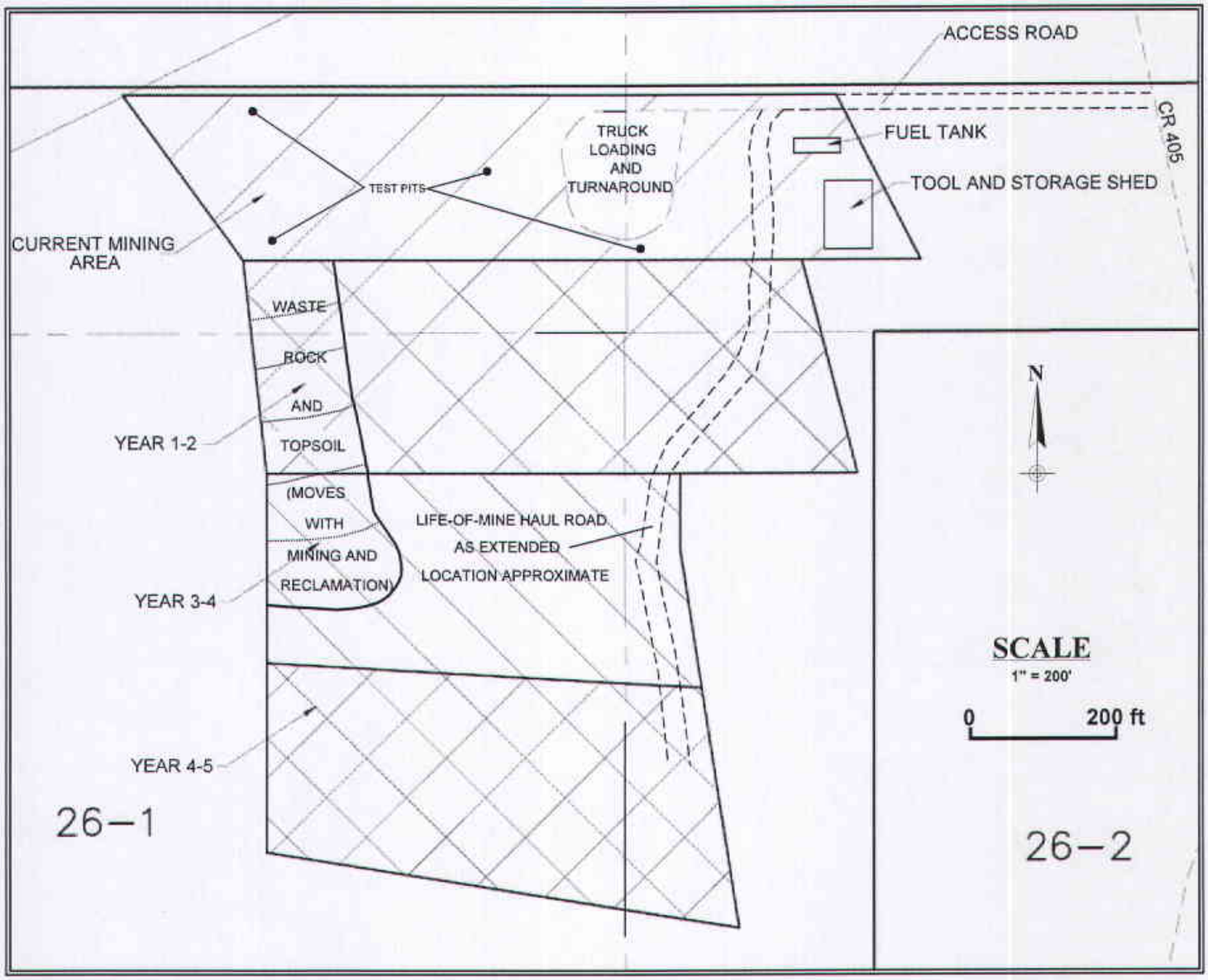
MAPS



Map CHQ-105.1 - Base Map
Contour interval 40 ft
Scale 1" ≈ 2,000'

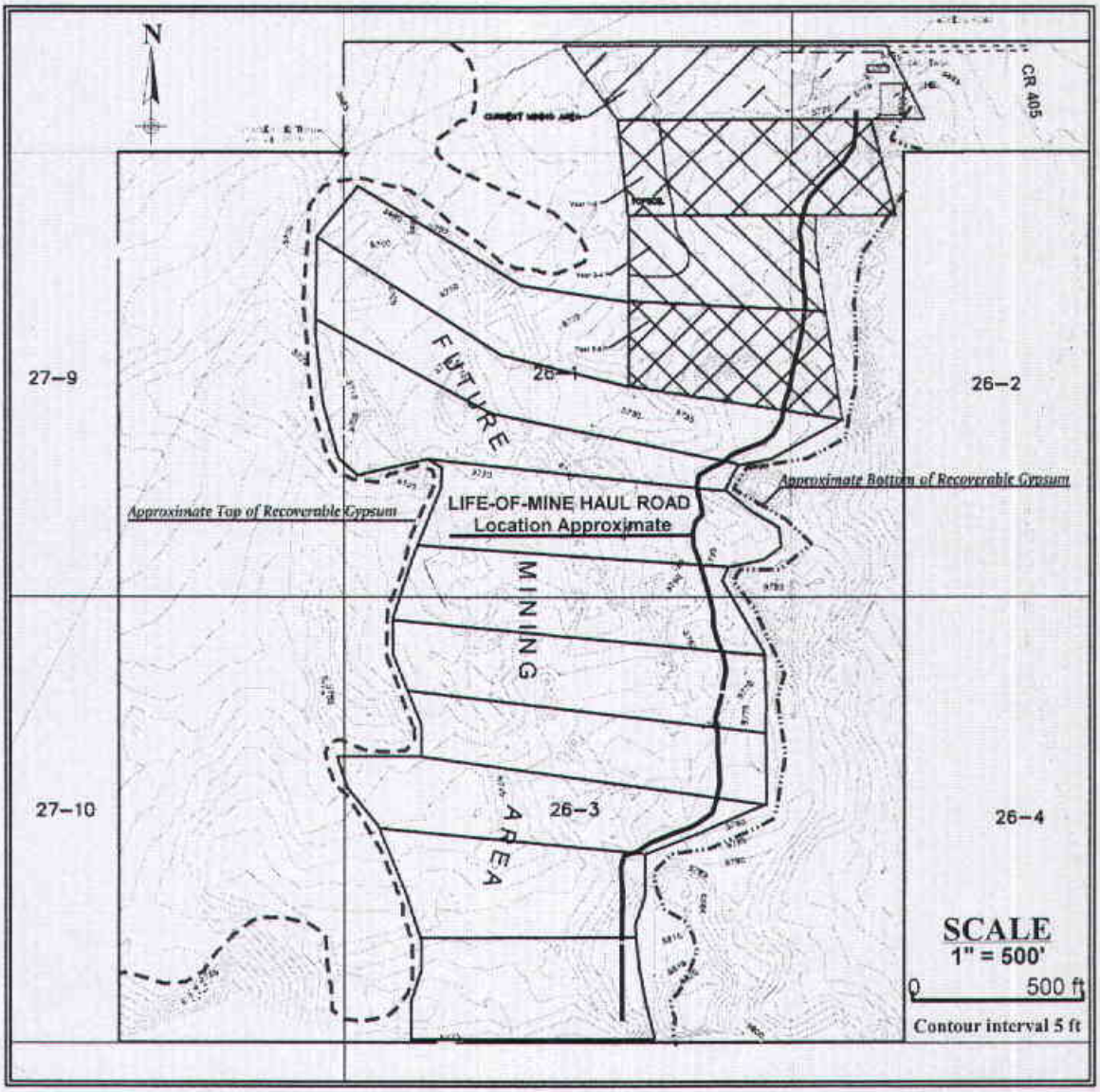
APPROVED
AUG 11 2008
DIV. OIL GAS & MINING

Prepared by Bruce A. Collins, Ph.D., September 2008
Modified from U.S. Geological Survey Buckhorn Reservoir 7.5' Quadrangle, 1969
(photoinspected 1978)



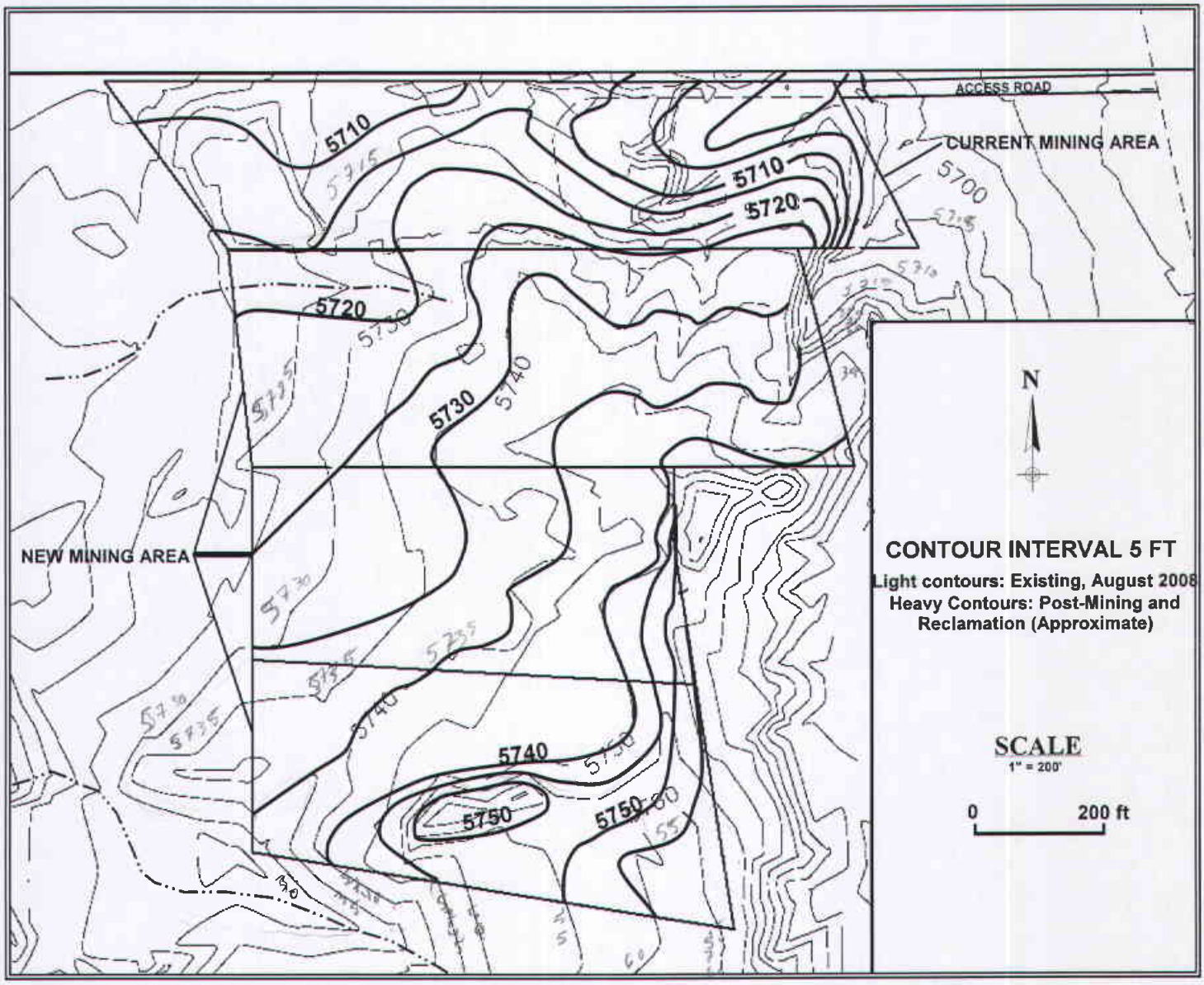
Map CHQ 105.2 - New Mining Area Surface Facilities Map
Year blocks are for reference only.

Prepared by Bruce A. Collins, Ph.D., September 2008
Modified from "Diamond K Gypsum Mining Plan, Section 23, T. 19 S., R. 10 E., SLB&M, Emery County, August, 2008, drawn by Lyndon Friant, Friant & Associates, Surveyors, August, 2008



Map CHQ 105.2a - Future Mining Area Surface Facilities Map
Future mining area blocks are for reference only
and do not indicate specific time periods.

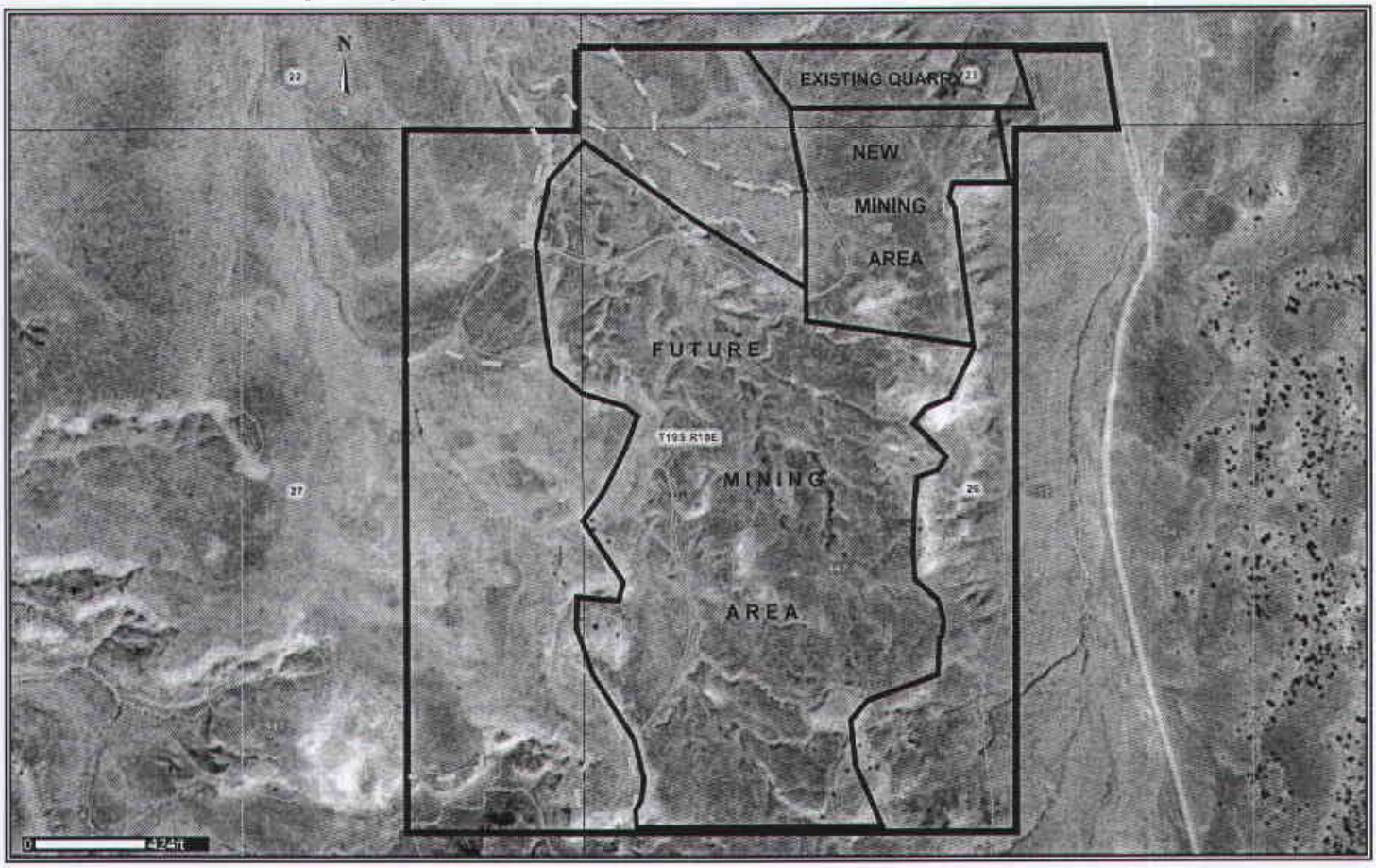
Prepared by Bruce A. Collins, Ph.D., September 2008
Modified from "Diamond K Gypsum Mining Plan, Section 23, T. 19 S., R. 10 E., SLB&M, Emery County, August, 2008, drawn by Lyndon Friant, Friant & Associates, Surveyors, August, 2008



Map CHQ 105.3 - Reclamation Treatments Map

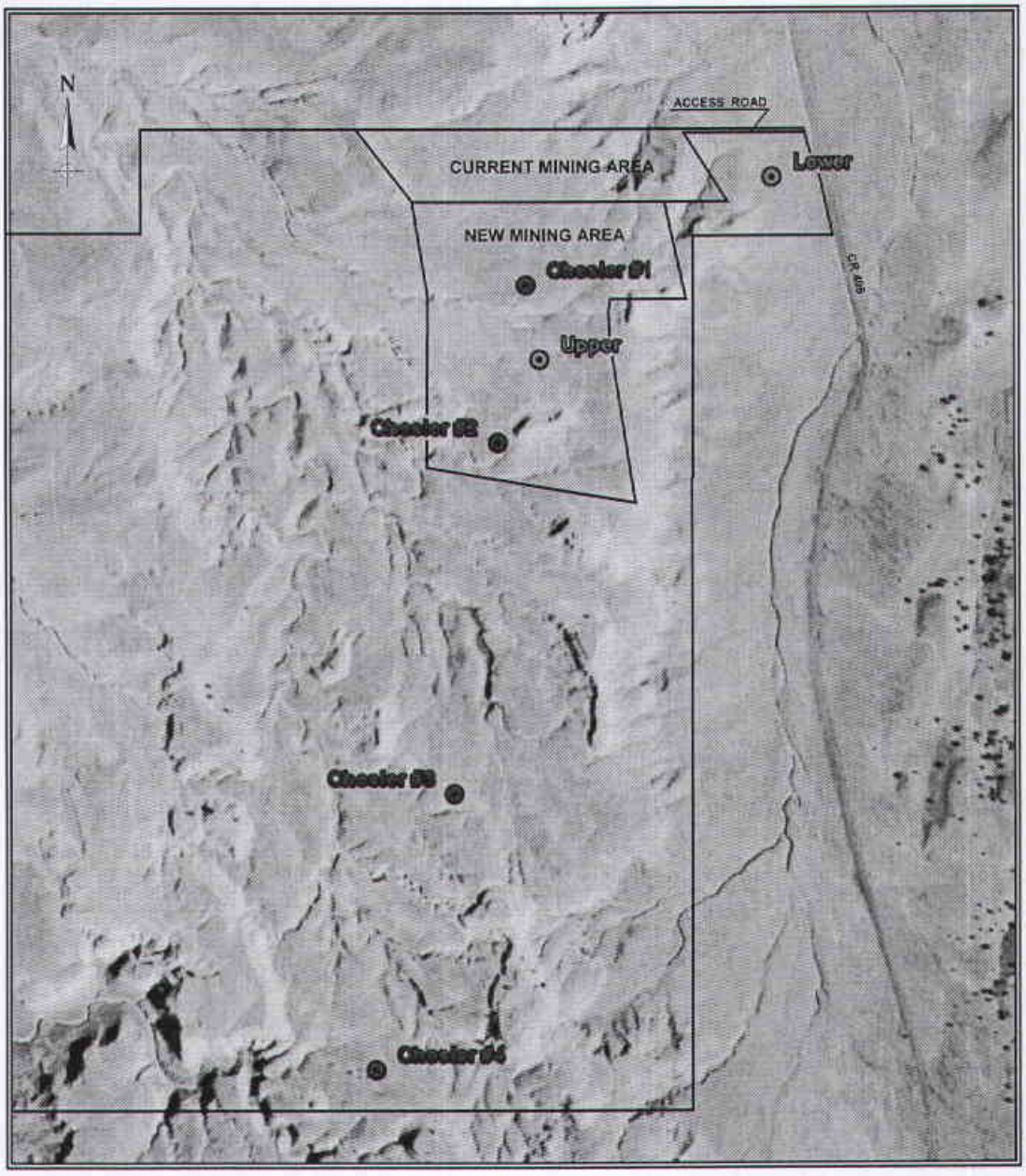
Existing quarry and new mining area August 2008 contours and approximate original contour reclamation grading. Actual final grading will depend on nature of deposit, as shown assumes 10-ft uniform thickness. All areas within indicated boundaries will be reclaimed and revegetated in accordance with §§ 105.3, 106.2-7, 110.1-5, and 112.

Prepared by Bruce A. Collins, Ph.D., October 2008
Modified from "Diamond K Gypsum Mining Plan, Section 23, T. 19 S., R. 10 E., SLB&M, Emery County, August, 2008," drawn by Lyndon Friant, Friant & Associates, Surveyors, August, 2008
with 5-ft contour topography added by Friant & Associates.



Map CHQ-106.5: Chalk Hills Quarry NRCS Soil Type Map
Scale 1" ≈ 810'

Prepared by Bruce A. Collins, Ph.D., September 2008
Modified from National Resources Conservation Service
Soil Survey Map, see Appendix A.



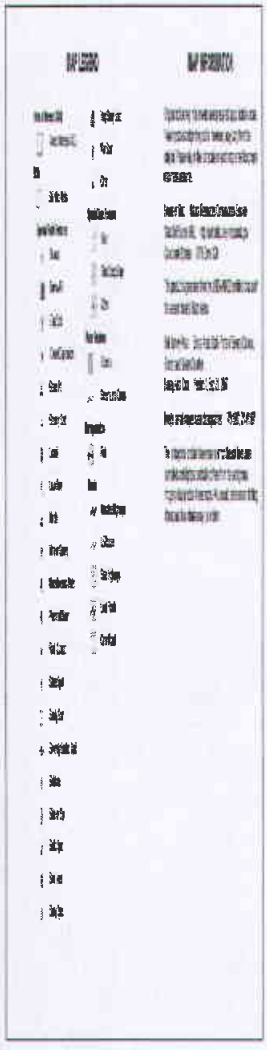
Map CHQ 106.5a – Soil Sample Location Map
Scale 1" = 500'

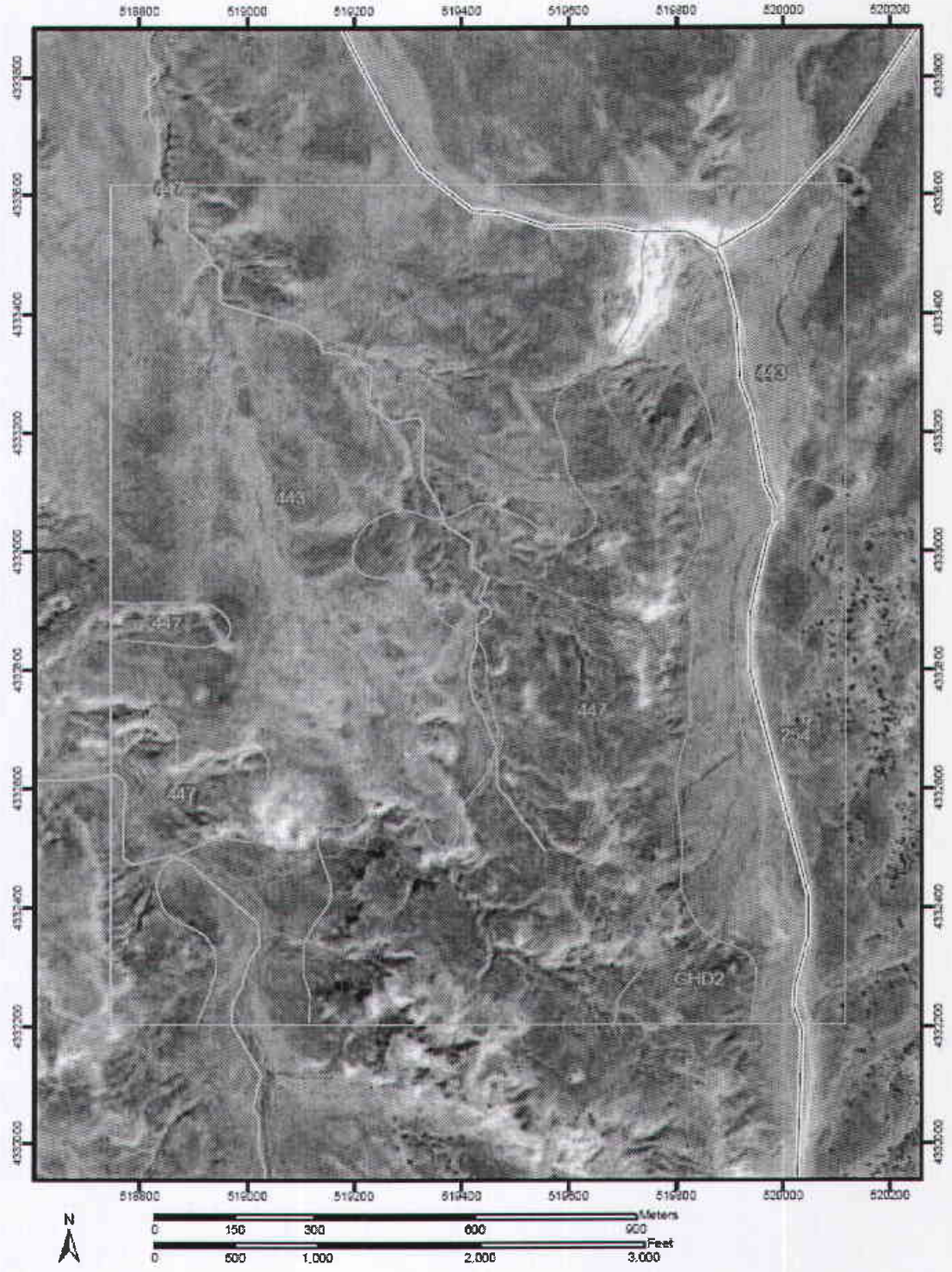
Prepared by Bruce A. Collins, Ph.D., September 2008
Base map from Google Earth®.

APPENDIX A

NATIONAL RESOURCES CONSERVATION SERVICE SOIL SURVEY MAP, EXPLANATIONS AND SOIL ASSOCIATION DESCRIPTIONS

Soil Map–Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties
(Chalk Hills Quarry Expanded Operations Area)





Map Unit Legend

Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties (UT623)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
254	Hideout-Gerst-Anasazi association, 3 to 30 percent slopes	39.8	7.2%
443	Robroost-Mussentuchit association, 2 to 12 percent slopes	313.8	57.1%
447	Mussentuchit-Goblin-Robroost association, 3 to 20 percent slopes	185.4	33.7%
GHD2	Mussentuchit-Humbug-Sinbad complex, 3 to 25 percent slopes	10.4	1.9%
Totals for Area of Interest (AOI)		549.4	100.0%

Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties Version date: 9/21/2007 10:49:36 AM

1. 447—Mussentuchit-Goblin-Robroost association, 3 to 20 percent slopes

Map Unit Setting

Elevation: 4,300 to 6,200 feet

Mean annual precipitation: 6 to 9 inches

Mean annual air temperature: 48 to 53 degrees F

Frost-free period: 130 to 160 days

Map Unit Composition

Mussentuchit and similar soils: 45 percent

Goblin and similar soils: 25 percent

Robroost and similar soils: 20 percent

Description of Mussentuchit

Setting

Landform: Hills

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Slope alluvium over residuum weathered from gypsiferous shale and sandstone

Properties and qualities

Slope: 5 to 15 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Gypsum, maximum content: 60 percent

Maximum salinity: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum: 3.0

Available water capacity: Low (about 3.8 inches)

Interpretive groups

Land capability (nonirrigated): 7e

Ecological site: Desert Shallow Gypsum (R034XY116UT)

Typical profile

0 to 2 inches: Fine sandy loam

2 to 4 inches: Fine sandy loam

4 to 30 inches: Fine sandy loam

30 to 35 inches: Loamy fine sand

35 to 39 inches: Bedrock

Description of Goblin

Setting

Landform: Hills

Landform position (two-dimensional): Footslope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Slope alluvium over residuum weathered from gypsiferous shale and sandstone

Properties and qualities

Slope: 5 to 20 percent

Depth to restrictive feature: 5 to 20 inches to paralithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Gypsum, maximum content: 60 percent

Maximum salinity: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum: 5.0

Available water capacity: Very low (about 1.9 inches)

Interpretive groups

Land capability (nonirrigated): 7e

Ecological site: Desert Shallow Gypsum (R034XY116UT)

Typical profile

0 to 3 inches: Fine sandy loam

3 to 17 inches: Fine sandy loam

17 to 21 inches: Bedrock

Description of Robroost

Setting

Landform: Hills

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Slope alluvium derived from gypsiferous sandstone and shale

Properties and qualities

Slope: 3 to 12 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 25 percent

Gypsum, maximum content: 35 percent

Maximum salinity: Nonsaline to moderately saline (2.0 to 12.0 mmhos/cm)

Sodium adsorption ratio, maximum: 13.0

Available water capacity: Moderate (about 8.0 inches)

Interpretive groups

Land capability (nonirrigated): 7e

Ecological site: Desert Gypsum (R034XY105UT)

Typical profile

0 to 3 inches: Loamy very fine sand

3 to 11 inches: Very fine sandy loam

11 to 31 inches: Very fine sandy loam

31 to 65 inches: Fine sandy loam

65 to 80 inches: Fine sandy loam

MUSSENTUCHIT SERIES

The Mussentuchit series consists of moderately deep, well drained, moderately rapidly permeable soils formed in eolian deposits and/or slope alluvium over residuum weathered from gypsiferous sandstone and shale. Mussentuchit soils are on cuestas, hills and structural benches and have slopes of 3 to 35 percent. The average annual precipitation is about 7 inches and the mean annual temperature is about 49 degrees F.

TAXONOMIC CLASS: Coarse-loamy, gypsic, mesic Leptic Haplogypsids

TYPICAL PEDON: Mussentuchit gravelly loam--rangeland. (Colors are for air-dry soil unless otherwise stated.) The surface is covered by about 20 percent angular chert gravel.

A--0 to 2 inches; light reddish brown (5YR 6/4) interior, gravelly loam, yellowish red (5YR 4/6) interior, moist; moderate medium platy structure; friable, soft, slightly sticky, nonplastic; common medium, fine and very fine roots; few fine interstitial and medium vesicular and tubular pores; 3 percent gypsum; 23 percent gravel; slightly effervescent (21 percent calcium carbonate equivalent), carbonates are finely disseminated; slightly alkaline (pH 7.8); abrupt wavy boundary. (0 to 7 inches thick)

By--2 to 13 inches; 60 percent reddish yellow (5YR 7/6) interior and 40 percent pinkish white (5YR 8/2) interior, fine sandy loam, yellowish red (5YR 4/6) rubbed, moist; massive; friable, slightly hard, nonsticky, nonplastic; common medium, fine and very fine roots; few medium and common fine tubular pores; common medium irregular gypsum crystals (55 percent gypsum); 1 percent gravel; slightly effervescent (10 percent calcium carbonate equivalent), carbonates are finely disseminated; slightly alkaline (pH 7.8); abrupt irregular boundary. (6 to 32 inches thick)

Cy1--13 to 23 inches; 70 percent pink (5YR 8/4) interior and 30 percent pinkish white (5YR 8/2) interior, fine sandy loam, reddish brown (5YR 5/4) rubbed, moist; massive; very firm, very hard, nonsticky, nonplastic; few fine and very fine roots; common coarse interstitial pores; many coarse irregular gypsum crystals (48 percent gypsum); 1 percent gravel; slightly effervescent (10 percent calcium carbonate equivalent), carbonates are finely disseminated; slightly alkaline (pH 7.7); abrupt irregular boundary.

Cy2--23 to 38 inches; 70 percent reddish brown (5YR 5/4) interior and 30 percent pinkish white (5YR 8/2) interior, gravelly fine sandy loam, reddish brown (5YR 5/4) rubbed, moist; massive; firm, hard, nonsticky, nonplastic; few fine and very fine roots; common coarse interstitial pores; many very coarse irregular gypsum crystals (47 percent gypsum); 25 percent gravel; slightly effervescent (8 percent calcium carbonate equivalent), carbonates are finely disseminated; slightly alkaline (pH 7.7); abrupt smooth boundary. (0 to 22 inches thick)

Cr--38 inches; 70 percent reddish brown (5YR 5/4) interior and 30 percent pinkish white (5YR 8/2) interior, moderately cemented calcareous shale bedrock, yellowish red (5YR 4/6) rubbed, moist; slightly effervescent (15 percent calcium carbonate equivalent); moderately alkaline (pH 8.2).

TYPE LOCATION: Emery County, Utah, about 6 miles southeast of Moore; about 1,600 feet west and 1,800 feet north of the southeast corner of sec. 5, T. 22 S., R. 8 E.; Short Canyon USGS quad; Lat. 38 degrees 55 minutes 45 seconds N., Long. 111 degrees 02 minutes 36 seconds W., NAD 83.

RANGE IN CHARACTERISTICS:

Soil moisture: The moisture control section is usually dry, but intermittently moist during late summer and early fall.

Aridic moisture regime.
Mean annual soil temperature: 47 to 56 degrees F.
Depth to paralithic contact: 20 to 40 inches, bedrock is soft gypsiferous shale or sandstone.
Depth to gypsic horizon: 2 to 7 inches.

Particle-size control section (weighted average:
Clay content: 6 to 18 percent.
Rock fragment content: 0 to 35 percent, mainly gravel with up to 15 percent cobbles of gypsiferous sandstone.

A horizon:
Hue: 5YR or 7.5YR
Value: 5 or 6 dry, 4 or 5 moist
Chroma: 4 to 6dry or moist
Texture: very fine sandy loam, fine sandy loam, gravelly loam
Clay content: 5 to 20 percent
Rock fragments: 0 to 30 percent gravel and channers; few cobbles
Calcium carbonate equivalent: 5 to 25 percent (no visible secondary carbonates present)
Gypsum: 1 to 15 percent
EC (mmhos/cm): 0 to 4
SAR: 0 to 5
Reaction: 7.4 to 8.4

Bw horizon (when present):
Hue: 5YR or 7.5YR
Value: 5 to 8 dry; 4 to 6 moist
Chroma: 2 to 6 dry or moist
Texture: fine sandy loam
Clay content: 5 to 18 percent
Rock fragments: 0 to 10 percent gravel
Calcium carbonate equivalent: 5 to 20 percent (no visible secondary carbonates present)
Gypsum: 1 to 15 percent
EC (mmhos/cm): 0 to 4
SAR: 0 to 1
Reaction: 7.4 to 8.4
By, BCy present in some pedons, and Cy horizons:
Hue: 5YR or 7.5YR
Value: 5 to 8 dry, 4 to 6 moist
Chroma: 2 to 6 dry or moist
Texture: channery loam, fine sandy loam, channery sandy loam, loamy fine sand, parachannery fine sandy loam, gravelly fine sandy loam, sandy loam
Clay content: 2 to 20 percent
Rock fragments: 0 to 35 percent total; 0 to 35 percent gravel and channers; 0 to 3 percent cobbles
Gypsum: 30 to 80 percent, occurring as fine to large crystals
Calcium carbonate equivalent: 5 to 20 percent (no visible secondary carbonates present)
EC (mmhos/cm): 0 to 4
SAR: 0 to 5
Reaction: 7.4 to 8.4

COMPETING SERIES: These are McCullan (AZ), Netoma (NM) and Rayohill (NM) series. Netoma and McCullan soils are deeper than 40 inches to a lithic or paralithic contact. Rayohill soils have 1 to 5 percent calcium carbonate equivalent and have electrical conductivity of greater than 4 mmhos/cm.

GEOGRAPHIC SETTING: Mussentuchit soils occur on hills, cuestas and structural benches at elevations of 4,300 to 7,200 feet. Slopes are 3 to 35 percent. Mussentuchit soils formed in eolian deposits and/or slope alluvium over residuum weathered from gypsiferous sandstone and shale.The mean annual precipitation ranges from 5 to 12 inches. Wettest months are July to October and driest months are December and June.mean annual temperature is 45 to 54 degrees F.; and the freeze-free period is 120 to 160 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Goblin and Robroost soils. Goblin soils are less than 20 inches deep to weathered sandstone or shale. Robroost soils are more than 40 inches deep to bedrock.

DRAINAGE AND PERMEABILITY: Well drained, low to high runoff, and moderately rapid permeability.

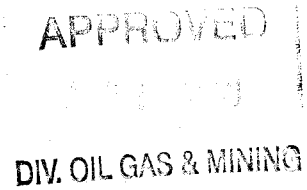
USE AND VEGETATION: Used for rangeland and wildlife habitat. The potential vegetation is galleta, Indian ricegrass, Mormon-tea, and shadscale.

DISTRIBUTION AND EXTENT: Southeastern Utah. This series is not extensive. LRR D, MLRAs 34B & 35.

MLRA OFFICE RESPONSIBLE: Lakewood, Colorado

SERIES ESTABLISHED: Capital Reef National Park, 2008. The name is from Mussentuchit Flat in an area where this soil is mapped.

REMARKS: Laboratory sample number 84UT-015-007



Diagnostic horizons and features recognized in this pedon are:
Series control section: 0 to 48 inches (0 to 122 cm)
Ochric epipedon: The zone from the surface to 2 inches (A horizon).
Gypsic horizon: The zone from 2 to 38 inches (By, Cy1, Cy2 horizons).

OSED scanned by SSQA. .

In October 2000, taxonomic classification was converted to the closest match found in Soil Taxonomy, Second Edition 1999. No update was made to horizon nomenclature, competing series section, etc. Other placements may be more appropriate after a complete update.

In August 2007 classification was changed to Leptic Haplogypsids from Typic Calcigypsids with Soil Taxonomy, Tenth Edition 2006. Horizon nomenclature and competing section was updated. Further examination of particle-size class is pending after possible revisions to psc determination methodology by Gypsum Task Force; current particle-size class is fine-loamy according to Keys to Soil Taxonomy, Tenth Edition, 2006.

In May 2008 the series was updated for the Emery SS and changed to established. Mussentuchit was correlated in the Capital Reef Soil Survey (UT685) in 11/1990. Somehow making Mussentuchit established was overlooked at the time of the Capital Reef Final Correlation. The original classification was coarse-loamy, gypsic, mesic, Typic Cacligypsids. Mussentuchit does not have secondary carbonates.

National Cooperative Soil Survey
U.S.A.

http://www2.ftw.nrcs.usda.gov/osd/dat/M/MUSSENTUCHIT.html

LOCATION GOBLIN UT

Established Series
Rev. JMD/RLM/MJD
08/2006
GOBLIN SERIES

The Goblin series consists of shallow, well drained, moderately rapidly permeable soils that formed in gypsiferous shale and sandstone on eroding pediments. Slopes range from 1 to 50 percent. Average annual precipitation is about 8 inches and mean annual temperature is about 50 degrees F.

TAXONOMIC CLASS: Loamy, gypsic, mesic, shallow Typic Torriorthents

TYPICAL PEDON: Goblin loam-rangeland. (Colors are for air-dry soil unless otherwise noted.)

A--0 to 3 inches; light reddish brown (2.5YR 6/4) loam, red (2.5YR 4/6) moist; weak fine granular structure; slightly hard, very friable; few fine roots; few fine tubular pores; slightly calcareous; carbonates are disseminated; moderately alkaline (pH 8.2); clear smooth boundary. (1 to 4 inches thick)

Cy--3 to 12 inches; yellowish red (5YR 5/6) loam, yellowish red (5YR 4/6) moist; weak subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine, few medium roots; few fine tubular pores; common gypsum crystals and veining; moderately calcareous; carbonates are disseminated; moderately alkaline (pH 8.4); clear smooth boundary. (4 to 18 inches thick)

Cr--12 inches; gypsiferous shale.

TYPE LOCATION: Wayne County Utah; 11 miles north, 4 miles west of Caineville, Utah; northwest 1/4, northeast 1/4 sec. 1, T. 27 S., R. 6 E.

RANGE IN CHARACTERISTICS:

Soil moisture: Typic aridic moisture regime.

Mean annual soil temperature: 47 to 57 degrees F.

Depth to shale: 5 to 20 inches

Rock fragments: 0 to 35 percent

A horizon
Hue: 2.5YR through 10YR

Value of 5 through 7 dry, 5 to 8 moist
Chroma of 4 through 6.

Cy horizon
Hue: 2.5YR through 10YR
Value: 5 through 8 dry, 5 to 8 moist
Chroma: 0 through 6
Texture: loam, fine sandy loam and loamy very fine sand.

COMPETING SERIES: There are no competing series.

GEOGRAPHIC SETTING: Goblin soils are on eroding pediment surfaces at elevations of 4,000 to 6,000 feet. Slopes are 1 to 50 percent. The soils formed in calcareous and gypsiferous alluvium and residuum of weathered shale and sandstone with some eolian influence. The mean annual temperature is about 45 to 59 degrees F., and the average annual precipitation is about 5 to 10 inches. The average freeze-free period is 120 to 180 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Sheppard, Robroost and Trachute soils. The Sheppard, Robroost and Trachute soils are all very deep.

DRAINAGE AND PERMEABILITY: Well drained; rapid runoff; moderately rapid permeability.

USE AND VEGETATION: Used mainly for rangeland and wildlife habitat. Potential native vegetation is galleta, Indian ricegrass, shadscale, and Mormon-tea.

DISTRIBUTION AND EXTENT: Southeastern Utah and Northern Arizona. The soils of this series are moderately extensive. MLRAs 35 and 43.

MLRA OFFICE RESPONSIBLE: Phoenix, Arizona

SERIES ESTABLISHED: Wayne County, Utah, (Henry Mountains Area), 1985. Named after Goblin Valley State Park in the survey area.

REMARKS: Diagnostic horizons and features in this pedon include:

Ochric epipedon - the zone from 0 to 3 inches (A horizon).

In Utah this series is correlated with Desert range sites.

National Cooperative Soil Survey
U.S.A.

http://www2.ftw.nrcs.usda.gov/osd/dat/G/GOBLIN.html

LOCATION ROBROOST UT

Established Series
Rev. JMD/RLM/RLB

02/2007
ROBROOST SERIES

The Robroost series consists of very deep, well drained, moderately permeable soils that formed in mixed alluvium and eolian deposits from gypsiferous sandstone and shale on alluvial fans and plains. Slopes range from 2 to 15 percent. The average annual precipitation is about 6 inches and mean annual temperature is about 50 degrees F.

TAXONOMIC CLASS: Coarse-loamy, mixed, active, mesic Typic Calcigypsids

TYPICAL PEDON: Robroost fine sandy loam, rangeland. (Colors are for air-dry soil unless otherwise noted.)

A--0 to 5 inches; light reddish brown (5YR 6/3) fine sandy loam, reddish brown (5YR 4/4) moist; weak thin platy structure; soft, very friable, few fine roots; few fine pores; strongly calcareous; carbonates are disseminated; moderately alkaline (pH 8.2); clear wavy boundary. (2 to 5 inches thick)

By--5 to 10 inches; light reddish brown (5YR 6/3) loam, reddish brown (5YR 5/3) moist; weak fine prismatic structure parting to weak, medium and fine subangular blocky; slightly hard, very friable, slightly plastic; few fine and medium roots; few fine pores; strongly calcareous; carbonates are disseminated; few thin veins and streaks of gypsum; moderately alkaline (pH 8.2); clear wavy boundary. (0 to 16 inches thick)

Byk1--10 to 30 inches; light reddish brown (5YR 6/3) loam, reddish brown (5YR 5/3) moist; weak coarse prismatic structure; slightly hard, very friable, slightly plastic; few fine and very few medium roots; few fine pores; many medium and large gypsum veins and splotches; strongly calcareous; carbonates are disseminated and in veins; moderately alkaline (pH 8.2); gradual wavy boundary. (20 to 40 inches thick)

Byk2--30 to 60 inches; light reddish brown (5YR 6/3) loam, reddish brown (5YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; very few medium and fine roots; few fine pores; common gypsum veins and splotches; strongly calcareous; carbonates are in veins and fine splotches; moderately alkaline (pH 8.2).

TYPE LOCATION: Wayne County, Utah; 3 miles south, 1 mile east of Hanksville, Utah; NE 1/4, sec. 34, T. 28., R. 11 E.

RANGE IN CHARACTERISTICS:

Soil moisture: usually dry in all parts of the moisture control section 50 to 75 percent of the time that the soil temperature at a depth of 20 inches exceeds 41 degrees F. Typic aridic moisture regime

Depth to gypsic horizon: 2 to 32 inches

Total carbonates plus gypsum is 40 percent or less (by weight)

Depth to calcic horizon: 2 to 18 inches

Percent calcium carbonates: 5 to 24 percent

Percent gypsum: 5 to 32 percent

Particle-size control section -

Clay content: less than 18 percent clay.

Other features: Some pedon contains Bw, Bk or Cy horizons

A horizon
Hue: 5YR or 7.5YR.
Value: 5 or 6 dry, or moist
Chroma: 3 to 6.
Reaction: slightly alkaline to strongly alkaline.

By horizon
Hue: 5YR or 7.5YR.
Value: 5 to 7 dry, or moist
Chroma: 3 to 6
Texture: fine sandy loam, very fine sandy loam, sandy loam or loam
Reaction: slightly alkaline to strongly alkaline.
Calcium carbonates equivalent: 3 to 15 percent
Percent gypsum: 10 to 35 percent

Byk horizon
Hue: 5YR or 7.5YR.
Value: 4 to 8 dry, or moist
Chroma: 3 to 6.
Texture: fine sandy loam, very fine sandy loam, sandy loam or loam.
Calcium carbonate equivalent: 8 to 30 percent
Percent gypsum: 5 to 30

Bk horizon (when present)
Hue: 5YR or 7.5YR
Value: 4 to 7 dry, or moist
Chroma: 3 to 6
Texture: Fine sandy loam, very fine sandy loam or loam
Calcium carbonate equivalent: 8 to 35 percent
Gypsum percent: 0 to 3 percent
Reaction: slightly or moderately alkaline

Cy horizon (when present)
Other features: Usually contains parachanners or paragravels from underlying bedrock and the gypsum are usually weathering from parent material.
Gypsum percent: 5 to 35 percent
Reaction: slightly to strongly alkaline.

COMPETING SERIES: The Brimhall (NM) series. Brimhall soils have 10YR and 2.5Y hues; bedrock is at 40 to 60 inches.

GEOGRAPHIC SETTING: Robroost soils are on alluvial fans and plains at elevations of 4,000 to 5,000 feet. Slopes are 2 to 15 percent. The soils formed in coarse textured alluvial and eolian deposits from gypsiferous sandstone and shale. The mean annual air temperature is about 50 to 52 degrees F. and the average annual precipitation is about 5 to 10

inches. The precipitation is fairly well distributed throughout the year. There is a slight bulge during August, September and October, with the driest months being May and June. The average freeze-free period is about 145 to 160 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Chipeta and Goblin and Mussentuchit soils. Chipeta and Goblin soils have paralithic contacts at less than 20 inches. Mussentuchit soils have a paralithic contact at 20 to 40 inches. These soils are on shale hills.

DRAINAGE AND PERMEABILITY: Well drained; slow runoff; moderate permeability.

USE AND VEGETATION: These soils are used mainly for rangeland and wildlife habitat. Potential native vegetation is galleta, alkali sacaton, shadscale, Mormon-tea and winterfat.

DISTRIBUTION AND EXTENT: Southeastern Utah. The soils of this series are moderately extensive; their total acreage is about 13,000 acres. MLRA is 35.

MLRA OFFICE RESPONSIBLE: Phoenix, Arizona

SERIES ESTABLISHED: Henry Mountains Area, Parts of Garfield, Kane and Wayne Counties, Utah, 1985. Named after Robbers Roost. A historical setting in the survey area.

REMARKS: Diagnostic horizon and features recognized in this pedon are:

Ochric epipedon the zone from 0 to 5 inches (A horizon)

Gypsic horizon the zone from 5 to 60 inches (By, Byk1, Byk2)

Calcic horizon the zone from 10 to 60 inches (Byk1 and Byk2)

Additional Data: NSSL data numbers; S82UT 037 006 and S84UT 015 008.

National Cooperative Soil Survey
U.S.A.

http://www2.ftw.nrcs.usda.gov/osd/dat/R/ROBROOST.html

APPENDIX B

SOIL SAMPLE ANALYSIS REPORTS
SOIL AND PLANT ANALYSIS LABORATORY AT BRIGHAM YOUNG UNIVERSITY

BRIGHAM YOUNG UNIVERSITY

Soil and Plant Analysis Laboratory
255 WIDB
Provo, UT 84602
801-422-2147

Plant and Animal Science Department

Name Diamond K. Gypsum
Street 1720 South Red Hills Drive
Richfield UT 84701
City State Zip

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 16-Sep-08
Telephone:
Fax:

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Chesler #1	Turf	7.08				Silt Loam		

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	4.45	X					
Phosphorus ppm P	9.81		X				
Potassium ppm K	73.60			X			
Salinity-ECe dS/m	2.40		X				
SAR-Sodium Absorption Ratio	0.02	X					
Calcium-SAR ppm Ca	483.84						
Magnesium SAR ppm Mg	11.52						
Sodium SAR ppm Na	1.44						

Notes:

Sample location: 39.14750N, 110.77252W
Elevation: 5,797 ft

BRIGHAM YOUNG UNIVERSITY

Soil and Plant Analysis Laboratory
255 WIDB
Provo, UT 84602
801-422-2147

Plant and Animal Science Department

Name Diamond K. Gypsum
Street 1720 South Red Hills Drive
Richfield UT 84701
City State Zip

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 16-Sep-08
Telephone: _____
Fax: _____

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Chesler #2	Turf	7.24				Silt Loam		

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	3.84	X					
Phosphorus ppm P	15.17		X				
Potassium ppm K	70.40			X			
Salinity-ECe dS/m	2.46		X				
SAR-Sodium Absorption Ratio	0.04	X					
Calcium-SAR ppm Ca	473.60						
Magnesium SAR ppm Mg	16.16						
Sodium SAR ppm Na	2.88						

Notes:

Sample location: 39.14610N, 110.77284W
Elevation: 5,801 ft

BRIGHAM YOUNG UNIVERSITY

Soil and Plant Analysis Laboratory
255 WIDB
Provo, UT 84602
801-422-2147

Plant and Animal Science Department

Name Diamond K. Gypsum
Street 1720 South Red Hills Drive
Richfield UT 84701
City State Zip

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 16-Sep-08
Telephone: _____
Fax: _____

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Chesler #3	Turf	7.16				Silt Loam		

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	4.52	X					
Phosphorus ppm P	8.97		X				
Potassium ppm K	57.60		X				
Salinity-ECe dS/m	2.42		X				
SAR-Sodium Absorption Ratio	0.00	X					
Calcium-SAR ppm Ca	460.80						
Magnesium SAR ppm Mg	11.84						
Sodium SAR ppm Na	0.16						

Notes:

Sample location: 39.14302N, 110.77334W
Elevation: 5,832 ft

APPROVED

DIV. OIL GAS & MINING

BRIGHAM YOUNG UNIVERSITY

Soil and Plant Analysis Laboratory
255 WIDB
Provo, UT 84602
801-422-2147

Plant and Animal Science Department

Name Diamond K. Gypsum
Street 1720 South Red Hills Drive
Richfield UT 84701
City State Zip

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 16-Sep-08
Telephone: _____
Fax: _____

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Chesler #4	Turf	7.17				Silt Loam		

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	3.33	X					
Phosphorus ppm P	4.58	X					
Potassium ppm K	54.40		X				
Salinity-ECe dS/m	2.50		X				
SAR-Sodium Absorption Ratio	0.01	X					
Calcium-SAR ppm Ca	588.80						
Magnesium SAR ppm Mg	11.52						
Sodium SAR ppm Na	0.96						

Notes:

Sample location: 39.14061N, 110.77422W
Elevation: 5,847 ft (approx)

APPROVED

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BRIGHAM YOUNG UNIVERSITY

Soil and Plant Analysis Laboratory
255 WIDB
Provo, UT 84602
801-422-2147

Plant and Animal Science Department

Name Diamond K Gypsum
Street 1720 South Red Hills Drive
Richfield UT 84701
City State Zip

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 18-Aug-08
Telephone: 435-896-8870
Fax:

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Upper	Turf	7.07				Loamy Sand		

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	1.09	X					
Phosphorus ppm P	0.25	X					
Potassium ppm K	16.00	X					
Salinity-ECe dS/m	0.72	X					
SAR-Sodium Absorption Ratio	0.00	X					
Calcium-SAR ppm Ca	618.72						
Magnesium SAR ppm Mg	6.88						
Sodium SAR ppm Na	0.32						

Notes: These soils are gypsypherous soils. Therefore a complete texture analysis cannot be performed. However, we did texture by feel (which is displayed in the "soil texture" box.

Sample location: 39.14683N, 110.77237 (approx)
Elevation: 5,799 (approx)

APPROVED

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BRIGHAM YOUNG UNIVERSITY

Soil and Plant Analysis Laboratory
255 WIDB
Provo, UT 84602
801-422-2147

Plant and Animal Science Department

Name Diamond K Gypsum
Street 1720 South Red Hills Drive
Richfield UT 84701
City State Zip

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 18-Aug-08
Telephone: 435-896-8870
Fax:

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Lower	Turf	7.09				Silt Loam		

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	7.57	X					
Phosphorus ppm P	14.67		X				
Potassium ppm K	96.00			X			
Salinity-ECe dS/m	1.10		X				
SAR-Sodium Absorption Ratio	0.23	X					
Calcium-SAR ppm Ca	652.32						
Magnesium SAR ppm Mg	13.76						
Sodium SAR ppm Na	22.08						

Notes: These soils are gypsypherous soils. Therefore a complete texture analysis cannot be performed. However, we did texture by feel (which is displayed in the "soil texture" box.

Sample location: 39.14847N, 110.76970 (approx)
Elevation: 5,757 (approx)

APPENDIX C

2008 DIAMOND K QUANTITATIVE VEGETATION INVENTORY
2007 DIAMOND K GYPSUM THREATENED & ENDANGERED SPECIES INVENTORY
2007 DIAMOND K GYPSUM THREATENED & ENDANGERED CACTUS INVENTORY

RONALD J. KASS, PH.D., BOTANIST, INTERMOUNTAIN ECOSYSTEMS, LLC

Intermountain Ecosystems, LLC.
270 east 1230 north
Springville, Ut. 84663
801-489-4590

2008 DIAMOND K GYPSUM QUANTITATIVE VEGETATION INVENTORY

Diamond K Gypsum of Richfield Utah has contracted Intermountain Ecosystems to conduct a quantitative vegetation analysis on entire proposed 62.28–acre quarry in Wedge Claim 23-19 and adjacent areas as defined by Diamond K. The area studied includes all or parts of Wedge Claims 23-10, 26-1 through 4, 27-9 and 27-10. The vegetation analysis estimated the percent live cover of shrubs, forbs and grasses. Two 50 meter line intercept transects were employed along a north to south axis and percent vegetative cover was estimated by species. The inventory was conducted July 9th 2008. by Dr Ronald J. Kass, botanist.

Common Name	Scientific Name	Plant Type	Percent Cover
Winterfat	Ceratoides lanata	Shrub	4.1
Shadscale	Atriplex confertifolia	Shrub	1.2
Sand dropseed	Sporobolus cryptandrus	Grass	2.0
Purple threeawn	Aristida purpureus	Grass	2.0
Snakeweed	Xanthrocephalum sarothorae	Shrub	0.84
Castle Valley saltbush	Atriplex nuttallii var cuneata	Shrub	0.65
Galleta grass	Hilaria jamesii	Grass	0.75
Yellow crypthantha	Cryptantha flava	Forb	0.75
Total Vegetative Cover			**12.29**

Plant cover is slightly biased because of late season lack of forb cover. There was some cryptobiotic crust but this was not estimated. Cattle were present in the surrounding areas.

%Ground Cover	%Litter	%Rock	%Bare ground
12.29	11.5	27.1	49.2

Intermountain Ecosystems, LLC.
270 east 1230 north
Springville, Ut. 84663
801-489-4590

2007 DIAMOND K GYPSUM THREATENED & ENDANGERED SPECIES INVENTORY

In connection with its preparation of an Environmental Assessment (UT-070-06-053) Diamond K Gypsum of Richfield Utah has contracted Intermountain Ecosystems to conduct a search for the San Rafael cactus (*Pediocactus despanii*) and the white tail prairie dog (*Cynomys leucurus*) on lands located in Emery County, Utah. The survey area incorporated the entire 155 acre Chalk Hills quarry defined by Diamond K. Findings regarding the San Rafael cactus are described in a separate report.

The survey was conducted on April 19, 2007 by Dr Ronald J. Kass, botanist, and Mitch Kass. No white-tailed prairie dogs or towns were observed. While not specifically inventoried for other threatened or endangered species or species of special interest, no evidence of such species was noticed during separate examinations for the San Rafael cactus (*Pediocactus despanii)* and the inventory for quantitative vegetative cover. A separate report for the quantitative vegetation analysis was submitted July 9, 2008.

Sincerely:

Ronald J. Kass, botanist

Intermountain Ecosystems, LLC.
270 east 1230 north
Springville, Ut. 84663
801-489-4590

2007 DIAMOND K GYPSUM THREATENED & ENDANGERED CACTUS INVENTORY

In connection with its preparation of an Environmental Assessment (UT-070-06-053) Diamond K Gypsum of Richfield Utah has contracted Intermountain Ecosystems to conduct a search for the San Rafael cactus (*Pediocactus despanii*) on lands located in Emery County, Utah. The survey area incorporated the entire 155 acre Chalk Hills quarry defined by Diamond K. The survey was conducted on April 19, 2007 by Dr Ronald J. Kass, botanist, and Mitch Kass.

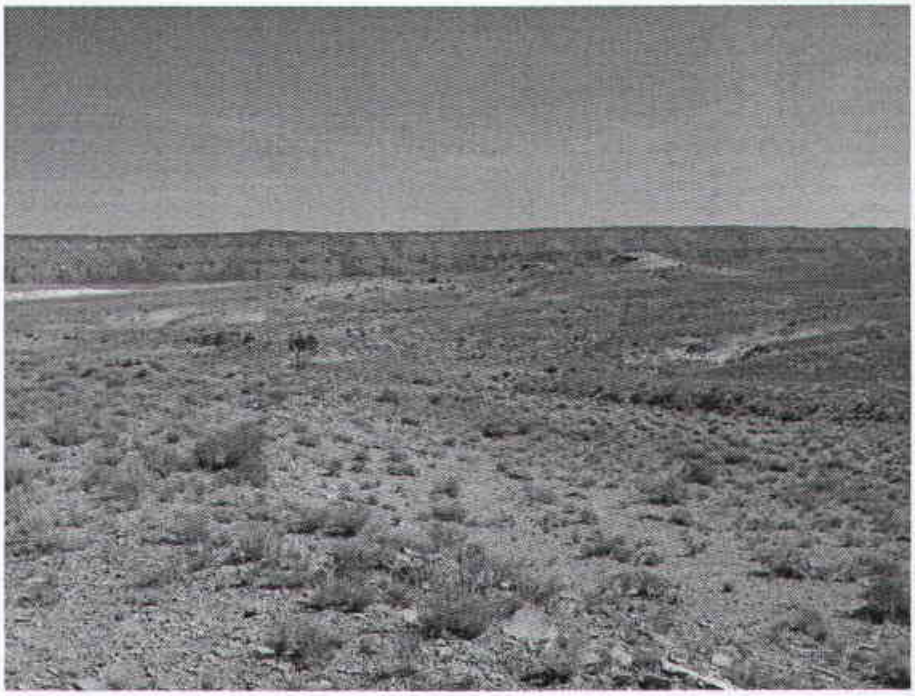
Prior to the field inventory, both inventory members visited flowering populations of *P. despanii* at the Wedge Overlook. These populations were in full flower. Methodology at the proposed site included walking linear transects along the proposed boundaries 20 ft. apart and locating any cacti. If *P. despanii* was located, a pin flag was established, a GPS point was recorded, the plants were mapped on an aerial photo, and a Population-Habitat Data Form was completed.

RESULTS—SAN RAFAEL CACTUS

No *P. despanii* were located within the project area. Approximately 4 man hours were spent looking for adult plants/ and seedlings. Habitat does not appear suitable and it is unlikely that any cacti will be found on this particular substrate. The site is also heavily overgrazed and usually heavy overgrazing precludes the cacti from establishing.

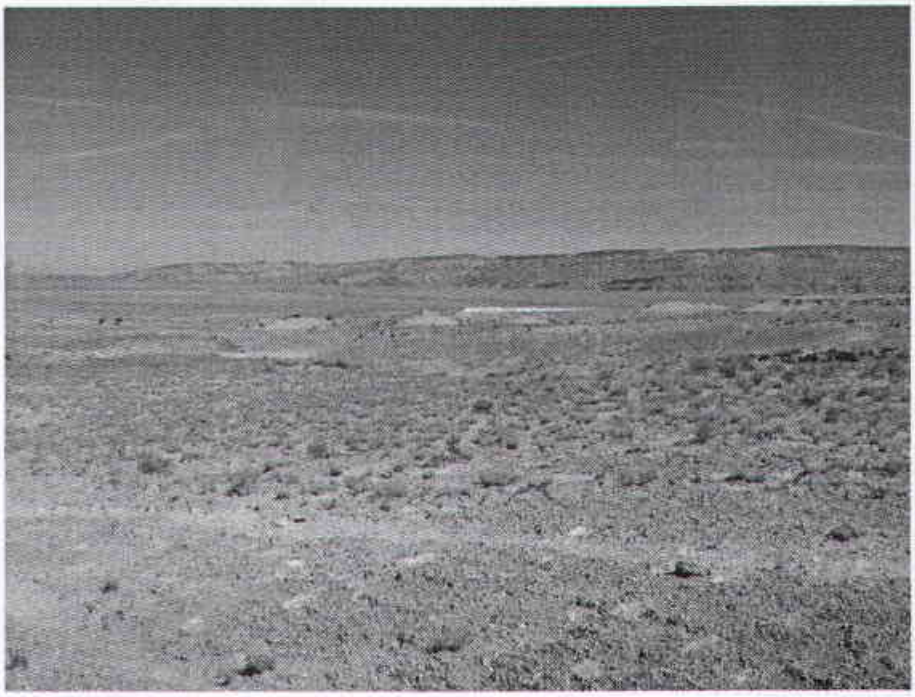
APPENDIX D

PHOTOGRAPHS

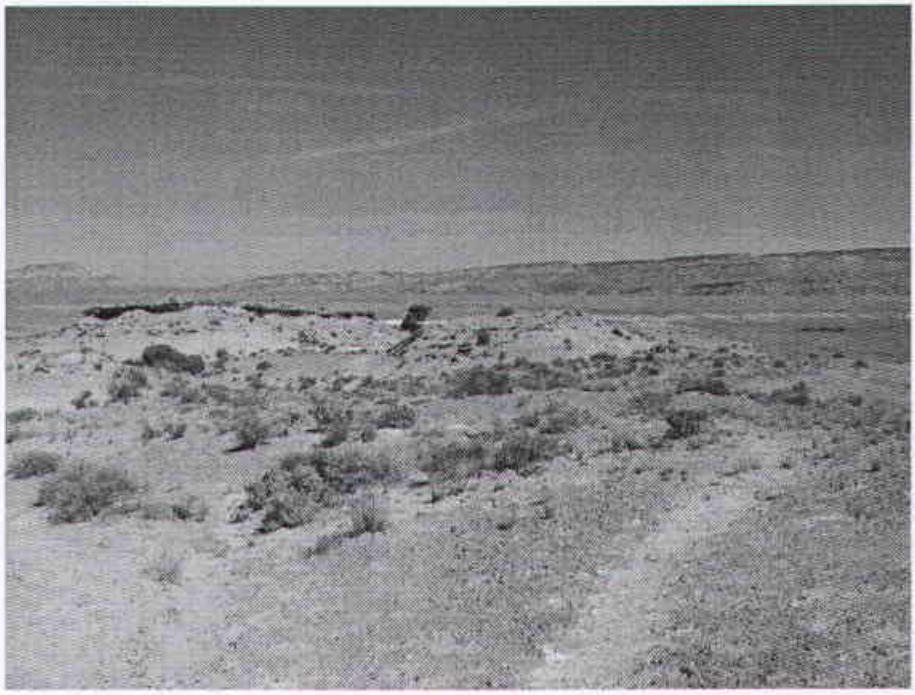


CHQ2008-009. From west boundary of 155-acre area looking northeast. Existing quarry visible at center left edge.

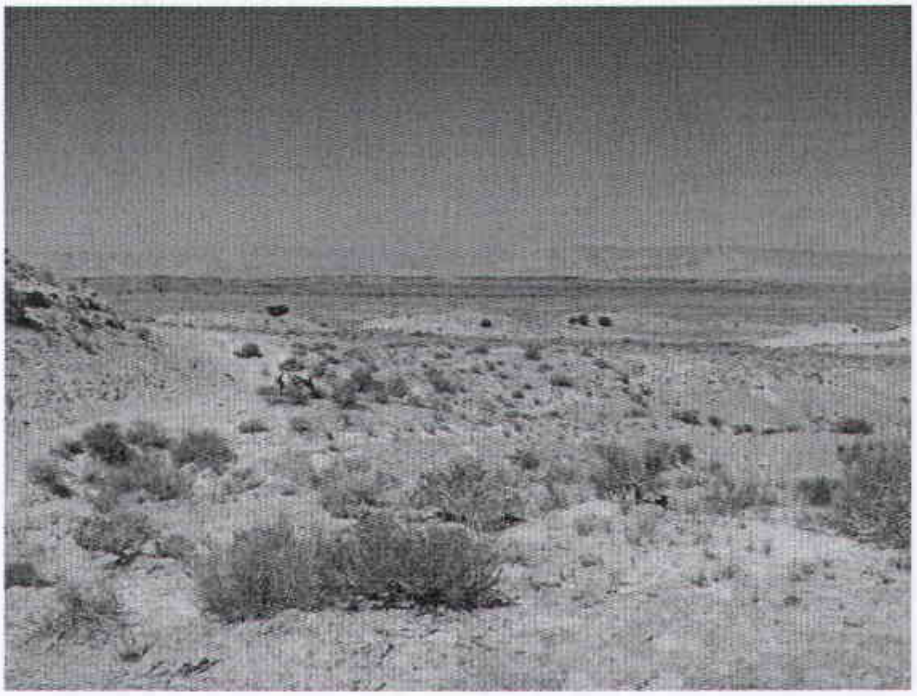
CHQ2008-011. From west boundary of 155-acre area looking east. Exposed gypsum through center.



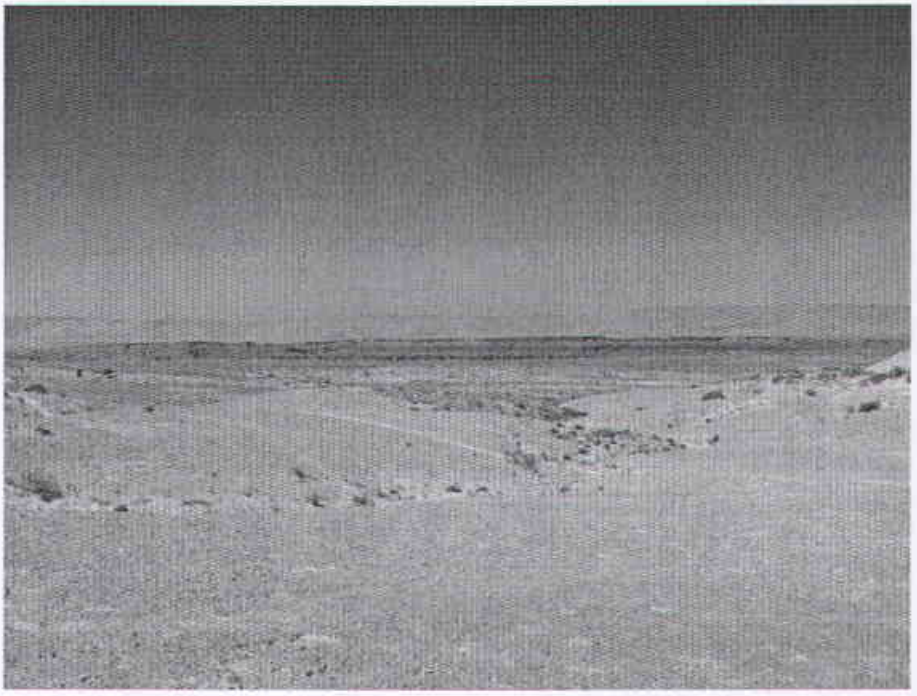
CHQ2008-013. From southwest boundary of 155-acre area looking north. Existing quarry just right and above center.



CHQ2008-017. From center east boundary of 155-acre area looking north. Existing quarry visible in distance behind juniper, center.

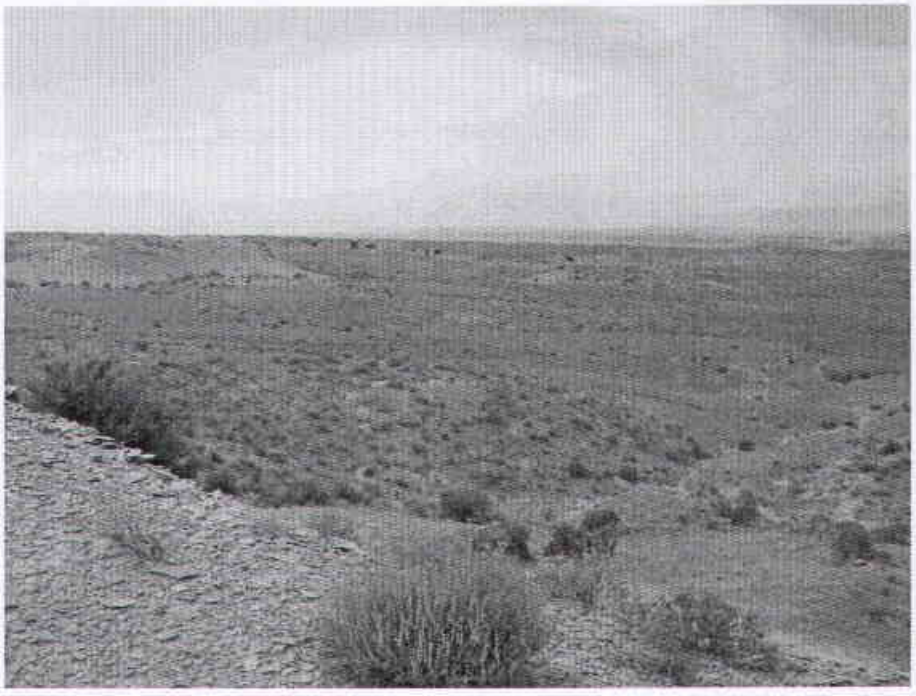


CHQ2008–20. From center east boundary looking west across future mining area.

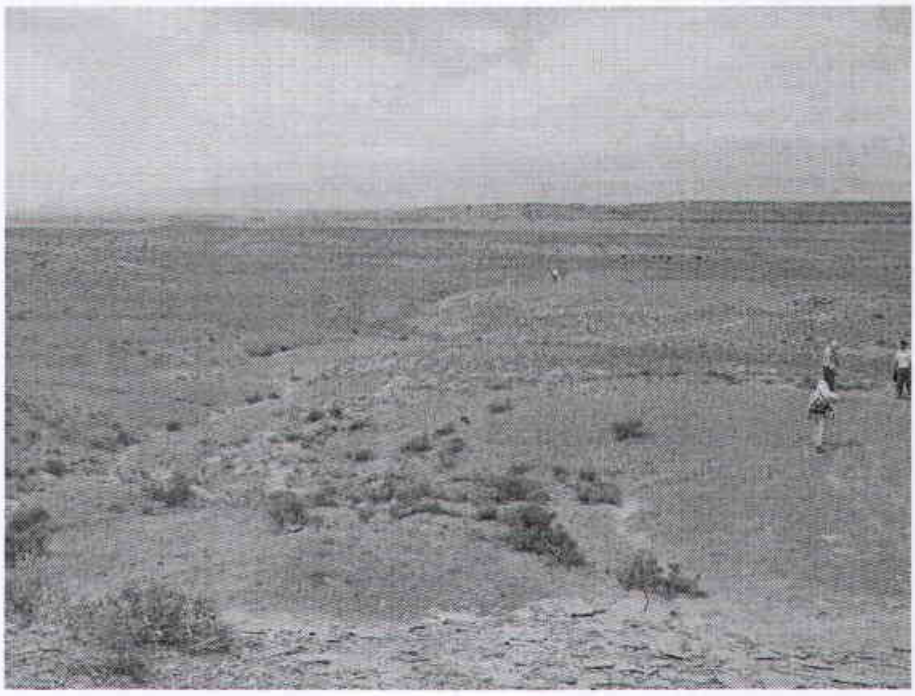


CHQ2008-022. From southeast corner of new mining area looking north-northwest. Exposed gypsum and weathered gypsum, foreground to center.

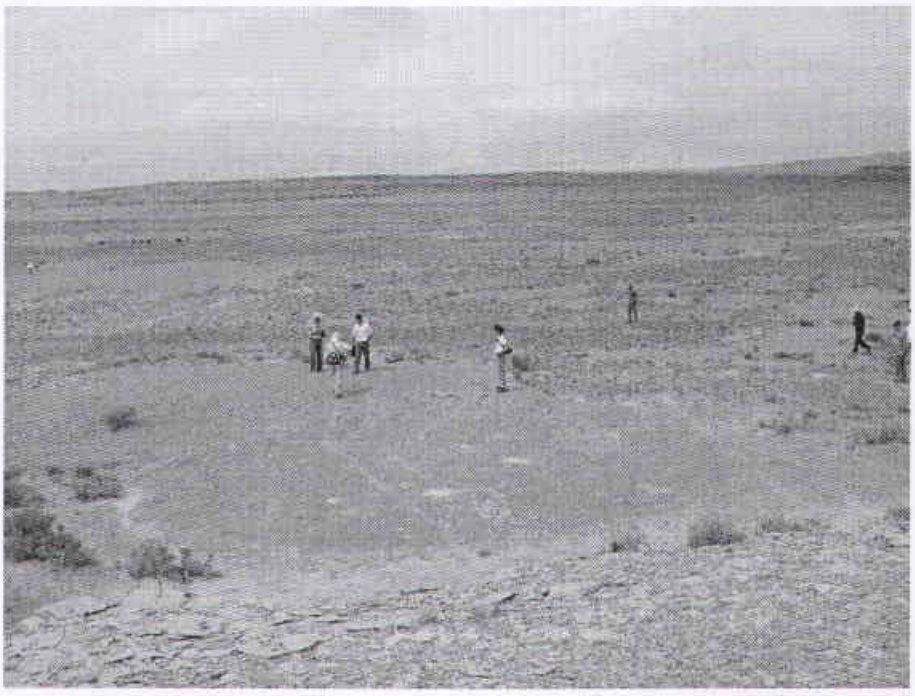
CHQ2008-026. From northeast corner of new mining area looking south.



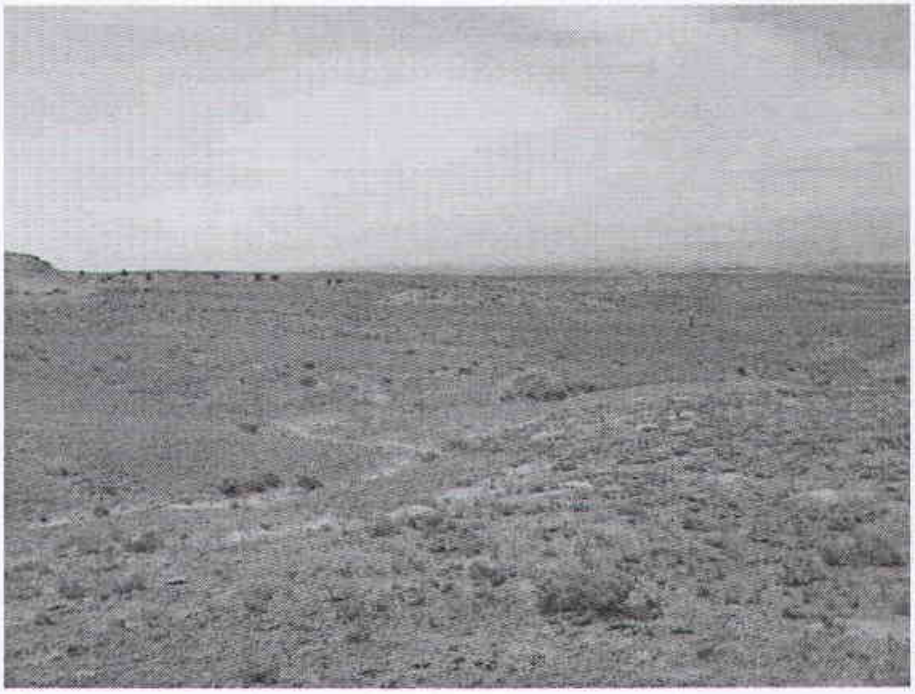
CHQ2006-0014. View from knob just east of northeast corner of new mining area looking southwest across new mining area.



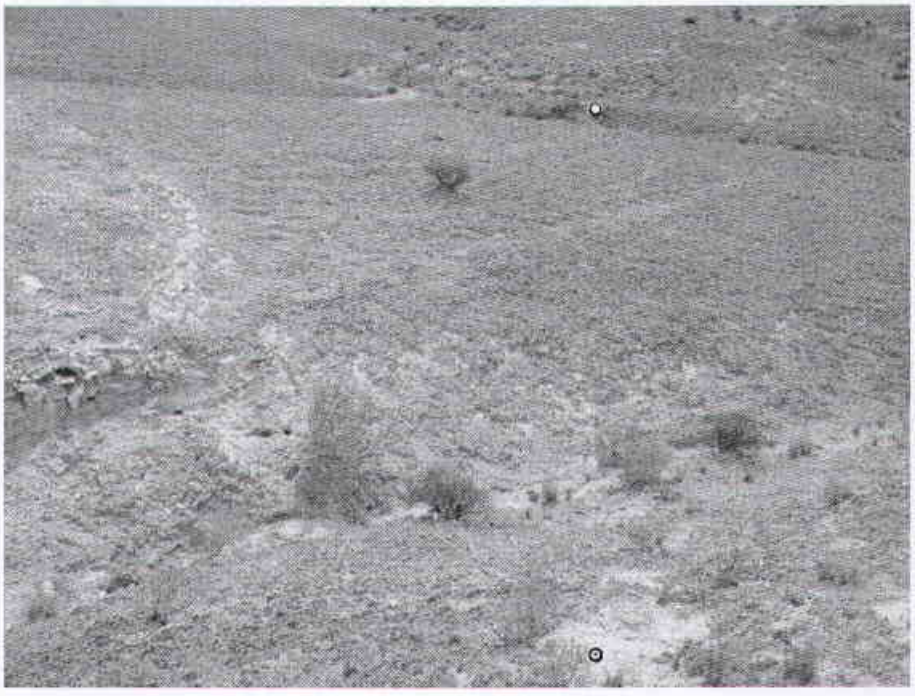
CHQ2006-0015. Same location as #0014 looking west across new mining area.



CHQ2006-0016. Same location as #0014 looking northwest across new mining area.



CHQ2006-0026. Interior of new mining area looking north-northwest.



CHQ2006-0030. Gypsum exposures, south-central part of new mining area. See also CHQ2008-011.

CHQ2006-0032. Interior of new mining area looking east. Surface is almost entirely exposed gypsum, bottom to middle of slopes below shale-capped knobs.

CHQ206-0033. Continuation of view above to the south.

APPENDIX D

FINAL RECLAMATION COST ESTIMATE

The following is an estimate of costs for the reclamation of the proposed Chalk Hills Quarry Operation Plan.

1. Clean up and removal of structures: $1000
2. Backfilling, grading and contouring. $48,000
3. Soil material redistribution and stabilization. Included In #2
4. Revegetation (preparation, seeding, mulching). $3000.00
5. Safety gates, berms, barriers, signs, etc. N/A
6. Demolition, removal or burial of facilities/structures, regrading/ripping of facilities areas. N/A
7. Regrading, ripping of waste dump tops and slopes. N/A
8. Regrading/ripping stockpiles, pads and other compacted areas. Included in #2
9. Ripping pit floors and access roads. Included in #2
10. Drainage reconstruction. $2500
11. Mulching, fertilizing and seeding the affected areas. The seeding is same as #4. Mulching and fertilizing not required.
12. General site clean up and removal of trash and debris. As needed
13. Removal/disposal of hazardous materials. $500
14. Equipment mobilization. Included in #1
15. Supervision during reclamation. $1000

Signed Rodney Rasmussen

Rodney Rasmussen Excavating November 21, 2008

APPROVED

DIV. OIL GAS & MINING

APPENDIX F

NOTICE OF INTENT (NOI) FOR COVERAGE UNDER THE UPDES GENERAL MULTI-SECTOR STORM WATER PERMIT FOR DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

STORM WATER POLLUTION PROTECTION PLAN

Emery County Chalk Hills Quarry
Industrial Storm Water Pollution Prevention Plan
(SWPPP)

November 26, 2008

Submitted to:
Utah Department of Environmental Quality
Division of Water Quality

Prepared for:
Diamond K Gypsum, Inc.

Prepared by:
InterTech Environmental & Engineering, LLC
345 Sinclair Street
Gillette, Wyoming 82716
(307) 686-6664

TABLE OF CONTENTS

1. Overview

This Storm Water Pollution Prevention Plan (SWPPP) has been developed for Diamond K Gypsum, Inc. (DKG) to serve as a defined protocol for the management of storm water and nonstorm water encountered during the mining of the Chalk Hills Quarry mine. The mining operation is described later in this document.

This SWPPP is designed to outline the storm water control/management program for mining and exploration activities conducted by DKG at the Chalk Hills Quarry mine. Company contact information is provided later in Section 1.

This plan will be implemented and supported by the owners and operators of the project, as detailed in Section 2. The Storm Water Pollution Team has the authority and resources to implement the plan outlined herein. Section 3 describes Project Information, including the general existing environmental baseline conditions at the site. Management techniques will include the use of standard best management practices (BMPs) as identified in Sections 4 and 5. Administrative and reporting requirements are outlined in Sections 6 and 7.

1.1. Introduction

This SWPPP provides for identification of the potential sources of pollution that could affect the quality of storm water discharged at the mining site. It also describes the BMPs used to reduce pollutants in storm water discharges associated with the Diamond K Gypsum, Inc. mining operation. This SWPPP further describes mining activities and identifies those individuals responsible for implementing, inspecting, and updating this plan. This SWPPP becomes effective upon submittal of the Notice of Intent (NOI) and will be maintained throughout the duration of the onsite activities.

1.2. General Facility Information

Name of the Facility:	Diamond K Gypsum, Inc. Chalk Hills Quarry	
Facility Location:	Fourteen miles southeast of Castle Dale, Utah	
Facility Contact:	Karen Palmer	
Title:	President, Diamond K Gypsum, Inc.	
Mailing Address:	1720 South Red Hills Dr. Richfield, Utah 84701	Telephone: (435) 896-8870
Facility Owner:	Diamond K Gypsum, Inc.	
Facility Operator:	Diamond K Gypsum, Inc.	
Emergency Contact:	Clint Henrie	Telephone: (435) 979-5066

Standard Industrial Classification (SIC) Code: 1499

1.3. Objectives

The goal of the SWPPP is to minimize the potential effects to surface waters by controlling site erosion and sediment transport in storm water runoff. Primary runoff sources include: storm water runoff from the access road, haul road and mining related non-point sources.

The objectives of this SWPPP are:

- To identify potential sources of water pollution at the Chalk Hills Quarry mining site;
- To describe the BMPs which will be used to control these sources; and,
- To outline the internal procedures and recordkeeping requirements including a facility inspection schedule, site compliance evaluation program, and record-keeping and reporting program that will enable the Chalk Hills Quarry project to comply with the intent of the plan.

It is important to note that DKG has already implemented certain priority activities of the plan to insure that in the interim, water quality is protected at the site. DKG will adhere to the requirements of this SWPPP and the General Storm Water Permit.

2. Storm Water Pollution Prevention Team

The DKG storm water pollution prevention team is responsible for developing, implementing, maintaining, and updating this SWPPP. The members of the team are familiar with all aspects of management and operations of the Chalk Hills Quarry mining site.

The members of the team are listed in Table 1, Appendix B, and their primary responsibilities include the following: plan implementation, BMP and Plan maintenance, record keeping, reporting, inspecting, training, and testing.

2.1. SWPPP Operational Control Requirements

DKG provides operational control over mine planning, operations and implementation of the storm water management program. InterTech Environmental & Engineering, LLC (ITE&E) was responsible for preparing the initial SWPPP document. Location and site maps are attached as part of the plan in Appendix A. DKG is responsible for overseeing the implementation of the SWPPP through the managing contractors, evaluating plan success, and directing changes to the SWPPP and related construction plans as needed.

All SWPPP team members identified in Table 1, Appendix A, have specific duties in overseeing the implementation of the plan. Specific duties will be defined within project areas if contractors are engaged, mining has commenced, and appropriate personnel are identified. DKG will coordinate meetings or required administration and program reporting with members of the team on a regular and timely basis. This will provide a timely exchange of information that may require modifications to storm water control-related activities.

3. Project Information

3.1. Project Description

The DKG Chalk Hills Quarry mining site is currently a 4.95 acre surface gypsum quarry. The proposed plan is to expand the operation south in stages, incorporating a new permitted and bonded "new mining area" of approximately 13 acres. This SWPPP covers the existing 4.95 acre mining operation and the additional proposed 13 acres. The total mining area covered by this SWPPP is approximately 17.95 acres.

The quarry is limited to exposed gypsum with limited topsoil and weathered unsalable gypsum which is removed for later use in reclamation. A small amount of gypsiferous shale that occurs erratically in the bed is also stored for reclamation use.

The soil associations encompassed by the mining operation are type 447, Mussentuchit-Goblin-Robroost association, 3% to 20% slopes, and type 443, Robroost-Mussentuchit association, 2% to 12% slopes. The area soils are characterized as well drained and posess moderate to moderately rapid permeability. Runoff ranges from low to rapid depending on the topography, vegetation, and dominant soil association. The soils range from moderately deep to shallow, making top soil preservation critical in future reclamation. It is also important to minimize disturbance to topsoil and vegetation in areas not encompassed by the mining operation.

One ephemeral drainage is located near the mine and may drain storm water, not captured on site and allowed to evaporate, in a high precipitation event.

Mining is accomplished by a roto-reclaimer (pavement stripper) with loading by way of a front-end loader. There are no post-mining waste or tailing piles.

The quarry has a storage building, portable sanitary facilities and a 1000 gallon aboveground storage tank for diesel fuel. The diesel fuel is stored in a steel tank which is stored in a lined and bermed pit with a secondary containment capacity of 2000 gallons.

3.1.1. General Location

The DKG Chalk Hills Quarry is located in Emery County, Utah approximately 14 miles southeast of Castle Dale, Utah, on the northwest flank of the San Rafael Swell. The center location of the "new mining area" is at approximately 39.148329 north latitude and -110.772148 west longitude using NAD83 datum. This places it in the extreme SW¼ of Section 19 and the NW¼ of Section 26, Township 19 South, Range 10 East, Salt Lake PM.

3.1.2. Site Maps

Appendix C, Figure 1 shows the general location of the mine area, the current mining area and breakdown of proposed expansion times and areas of expansion for the new permitted and bonded "new mining area" along with the life of mine haul road. This map also shows the fuel storage area and storage shed. This map will show the locations of BMPs.

Appendix C, Figure 1 shows the existing mining area, the "new mining area" and the proposed life-of-mine haul road. This map also shows the natural drainage and stream channels and is an overview of the area surrounding the mine.

3.2. Receiving Waters and Wetlands

There are no receiving waters or wetlands that could reasonably be expected to be impacted by this facility. All storm water from mining areas, including from topsoil and interburden/waste gypsum piles, will be contained in the pit and allowed to evaporate naturally. Uncontained storm water from the perimeter out slopes and storm water that does not fall within the mining area will be kept from the mining area through the use of berms. Erosion control on the out slopes and in non-mining areas will consist mainly of straw bales, wattles and berms as needed, but may include the use of silt fences, erosion control blankets and armored surfacing as deemed necessary.

Although the mine site will not discharge storm water, as all storm water falling within the mining area will be contained on site and allowed to evapor ate, analytical sampling will be conducted in 2009 and 2011 to meet the requirements of the General Permits Subpart J. The sampling requirements are discussed in Section 6.

3.3. Summary of Potential Pollutant Sources

Each significant material to be used or stored at the site has been evaluated to determine the potential for these materials to contribute to pollution associated with storm water runoff from the site. Table 2, Appendix B, summarizes potential pollutant sources at the DKG Chalk Hills Quarry.

3.3.1. Quantity and Nature of Potential Pollutants

Potential pollutants of concern mainly consist of sediments originating from areas disturbed during mining. These include suspended solids, fuel, grease, and oil that may pollute storm water runoff.

3.3.2. Prevention of Potential Pollutants Discharge

BMPs to contain potential pollutant discharges associated with erosion and sedimentation may consist of the following as needed: temporary seeding, mulching, silt fences, and straw bales. The type and location of a selected BMP will be determined on a incident specific basis. The control program will also include regular monitoring to evaluate the efficiencies of these potential pollutant discharge prevention measures.

Oil and/or fuel spills would be cleaned up using dry gypsum which would then be placed in appropriate containers and disposed of as required.

3.4. List of Past Spills and Leaks

There is no oil or other known polluting materials that have been spilled or leaked over the last three years at this site.

Storm water that comes in contact with the mining area is retained on site and suspended solids precipitate out during evaporation.

4. BMPs

Storm water management controls or BMPs will be implemented to protect storm water discharged from the DKG Chalk Hills Quarry. The following describes the approach for installing storm water pollution controls at the site. As there will be no storm water or non-storm water discharges from the mine site, discharge diversions and drainage/storm water conveyance systems are not addressed.

4.1 Pre-reclamation Stabilization Measures

Pre-reclamation stabilization measures during mining typically include the use of any or all of the following: temporary seeding, mulching, silt fences, and straw bales. The type and location of a selected BMP will be determined on a site specific basis. The control program will also include regular monitoring to evaluate the efficiencies of these pre-reclamation stabilization measures.

4.2 Mining and Post-mining Reclamation Stabilization Measures

Permanent stabilization measures will be installed once the facility is in its final configuration. Slopes will be graded to a stable angle, and revegetation initiated as concurrent reclamation or during closure of the facility. Active storm water controls will be monitored/inspected quarterly during the active mining phase. This will involve "efficiency audits" by DKG, which consider the water pollution controls vs. water quality sampling results. Additional BMPs may be added depending on these monitoring results. As areas are reclaimed and released, BMPs will be removed when they are no longer necessary to the final reclamation measures.

4.2.1. Stabilized Reclaimed Areas

Once an area is determined to be "stabilized", it may be classified as such in the SWPPP. Further inspections or additional BMP installations may be required once this designation has been made.

5. Non-Storm Water Discharges

Due to the type of operation and equipment used, there are no anticipated non-storm water discharges from this facility.

6. Site Inspections and Administrative Requirements

6.1. Inspection Frequency

Regular daylight site inspections of the storm water BMP program for the DKG Chalk Hills Quarry will occur on a quarterly basis: January through March (storm water runoff or snow melt); April through June (storm water runoff); July through September (storm water runoff); October through December (storm water runoff or snow melt). Inspection frequency may be increased at such times as unusually heavy precipitation has occurred. Precipitation events will be monitored using an on-site rain gauge. Inspections will be recorded, as described below.

6.1.1. Scope of Inspections

Inspections will include all areas of the site impacted by mining activities. This includes all areas used for the storage of materials that are exposed to precipitation. The inspector will evaluate potential pollutant sources identified earlier in Section 3.3 of the SWPPP. Sediment and erosion controls will be observed to evaluate effectiveness. Inspections will be completed by qualified DKG personnel or a consultant hired by the mine.

6.1.2. Inspection Report

Each inspection will be documented on a SWPPP inspection form and contain the following minimum information:

1. Inspection date
2. Inspector's name and title
3. Weather information since the last inspection and amount of rainfall
   - Rainfall to be monitored using an on-site rain gauge
4. Locations of sediment discharge or other pollutants (photo-documented if problem)
5. Locations of BMPs that need to be maintained
6. Locations of BMPs that failed or are inadequate
7. Locations where additional BMPs are required
8. List any corrective actions including changes necessary to the SWPPP
9. Any water quality monitoring results as they are made available

Records of inspections and required follow-up actions will be retained for three years from the date that the inspection took place. Records will be filed at the DKG corporate office in Richfield, Utah and at the mine site.

6.2. Follow-up Actions

Any deficiencies in the implementation of the SWPPP or in BMPs detected during routine facility inspections will be corrected before the next storm event, or as soon as practicable. If BMPs need to be modified, or if additional BMPs are required, these will also be installed prior to the next storm event.

6.3. Annual Report

DKG commits to completing an annual report discussing the effectiveness of the BMPs onsite. This report will include any changes that have been made to the SWPPP, rationale for the changes, any spills that occurred, actions taken as a result of the spill, inspection results, and any other information relevant to the plan. The annual report is to be maintained onsite. Copies of the report will be submitted to UDEQ at the following address:

Executive Secretary
Water Quality Board
Division of Water Quality
PO Box 144870
Salt Lake City, Utah 841 14-4870

6.3.1. Record Keeping and Reporting Forms

The following BMP-related information will be collected at the site on specially designed forms:

- Significant spill report (as needed)
- Employee training (annual/new employee)
- Good housekeeping and preventive maintenance (annual)
- SWPPP inspection report (every quarter)

Forms that are completed throughout the year will be amended to this plan and made available for regulatory inspections.

6.4. Retention of Records

DKG hereby commits to retaining all records pertaining to the SWPPP for a period of three years from the initial date the SWPPP was implemented and for at least 1 year after coverage under this permit terminates. These records will be made available to the UDEQ upon written request.

6.4.1. Records Content Monitoring Information Shall Include:

Per UDEQ as there will be *no discharge* of storm water from the Chalk Hills Quarry mining site there are no *grab sample* monitoring requirements for this site. The *Storm Water Discharge Monitoring Report* (*SWDMR*), "Total Storm Water Discharge Points" shall be "0".

6.5. Storm Water Precipitation Event Reporting

DKG shall submit sampling monitoring results of *no discharge* associated with industrial activity obtained during the second year reporting period on *Storm Water Discharge Monitoring Report* (*SWDMR*) form(s) postmarked no later than the 31st day of the following March. Monitoring results of *no discharge* associated with industrial activity during the fourth year reporting period, shall be submitted on *SWDMR* form(s) postmarked no later than the 31st day of the following March. Signed copies of *SWDMR*s, or said certifications, shall be submitted to the *Executive Secretary* at the address listed below:

Executive Secretary
Water Quality Board
Division of Water Quality
PO Box 144870
Salt Lake City, Utah 841 14-4870

6.5.1. Analytical Monitoring Requirements

Per UDEQ as there will be *no discharge* of storm water from the Chalk Hills Quarry mining site there are no *analytical* monitoring requirements for this site.

6.5.2. Quarterly Visual Examination of Storm Water Quality

Examinations shall be conducted in each of the following periods for the purposes of visually inspecting storm water quality associated with storm water runoff or snow melt: January through March; April through June; June through S eptember; and October through December.

Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins accumulating. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual will carry out the collection and examination of accumulation for the life of the permit.

When DKG is unable to collect samples over the course of the visual examination period as a result of adverse climatic conditions, DKG will document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examinations. Adverse weather conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

Visual examination reports will be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

7. Additional SWPPP Requirements

7.1. Maintaining an Updated SWPPP

The SWPPP must be maintained and amended to address changing conditions at the site during the life of the mine. It is understood that the SWPPP will be revised when DKG makes changes to the Chalk Hills Quarry mine in design, operation, or maintenance, that has significant effect on the potential for the discharge of pollutants to the waters of the State or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants.

7.2. SWPPP Availability

This SWPPP will be kept onsite and made available upon request to the Executive Secretary; other local agencies approving storm water management plans; interested members of the public; local government officials; or to the operators of a municipal separate storm sewer receiving discharges from the site.

7.3. Certification of the SWPPP

A completed copy of the Notice of Intent (NOI) is included herein as Appendix A.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ _____

Karen Palmer, President, DKG Date

_____ _____

Printed Name Title

APPROVED

DIV. OIL GAS & MINING

8. References

Utah SWPPP General Industrial Permit

- http://www.waterquality.utah.gov/UPDES/stormwaterind.htm. accessed 11/5/2008

EPA SWPPP Template, Version 1.0, January 9, 2007

- http://www.epa.gov/npdes/pubs/sw_swppp_template_authstates.doc. accessed 11/5/2008

Appendix II.J. Storm Water Discharges Associated With Industrial Activity From Mineral Mining and Processing Facilities.

- http://www.waterquality.utah.gov/UPDES/MSGPNOI-NOT2007.doc. accessed 11/5/2008

NRCS Soils Website

- http://soils.usda.gov/. accessed 11/5/2008

U.S. Environmental Protection Agency. 1992. Stormwater Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices. Washington, D.C.

U.S. Department of Transportation. 1995. Best Management Practices for Erosion and Sediment Control. Report No. FHWA-FLP-94-005. Eastern Federal Lands Highway Design. Sterling, VA.

Colorado Department of Transportation. 2002. Erosion Control and Stormwater Quality Guide. Denver, CO.

- www.dot.state.co.us

Lincoln, R. 1996. Montana Sediment and Erosion Control Manual. Montana Department of Environmental Quality. Helena, MT.

U.S. Bureau of Land Management. Undated. Surface Operating Standards for Oil and Gas Exploration and Development: Gold Book.

APPENDIX A

Notice of Intent (NOI)

STATE OF UTAH, DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER QUALITY
288 North 1460 West, P.O. Box 144870, Salt Lake City, Utah 84114-4870 (801)538-6146

NOI

Notice of Intent (NOI) for Coverage Under the UPDES General Multi-Sector Storm Water Permit for Discharges Associated with Industrial Activity, Permit No. UTR000000. INSTRUCTIONS ON BACK PAGE

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form intends to be authorized by a UPDES permit issued for storm water discharges associated with industrial activity in the State of Utah. Becoming a permittee obligates such discharger to comply with the terms and conditions of the permit. ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM. A different NOI form is provided for construction activities.

I. FACILITY OPERATOR INFORMATION

Name: DIAMOND K GYPSUM, INC **Phone:** (800) 497-7861

Address: 1720 SOUTH RED HILLS DRIVE **Status of Owner/Operator:** F

City: RICHFIELD **State:** UT **Zip:** 84701

Facility Contact Person: KAREN PALMER **Phone:** (435) 896-8870

Facility Contact Person Title: PRSIDENT, DIAMONK K. GYPSUM, INC.

II. FACILITY SITE/LOCATION INFORMATION

Is the facility located on Indian Lands? (Y or N) N

Name: DIAMIND K. GYPSUM, INC. CHALK HILLS QUARRY

Address: FOURTEEN MILES SOUTHEAST OF CASTLE DALE, UTAH **County:** EMERY

City: _____ **State:** UT **Zip:** _____

Latitude: 39°08'54" **Longitude:** 110°46'20" **Quarter:** _____ **Section:** _____ **Township:** _____ **Range:** _____

Site Contact Person: CLINT HENRIE **Phone:** (435) 979-5066

Site Contact Person Title: _____

III. SITE ACTIVITY INFORMATION

APPROVED

Name of Municipality which Operates the Storm Sewer System: N/A

Receiving Water Body(s): N/A

DIV. OIL GAS & MINING

Is there existing quantitative storm water discharge data? Yes ☐ **No** ☒

Is the facility required to do analytical monitoring? (See permit conditions Part V. and Sector monitoring requirements.) Yes ☒ **No** ☐

Is the facility required to do visual monitoring? (See permit conditions near the end of applicable Sector(s); Appendix A to AD) Yes ☒ **No** ☐

Is the facility required to submit monitoring data or retain it on site? Yes ☒ **No** ☐

Is This a New Facility, or is it an Existing Facility? New ☐ **Existing** ☒

If This is an Existing Facility, and the Start-up Date was After Oct. 1992, Please Fill in the Start-up Month:

Month (Jan, Feb., etc.): Nov **Year:** 2007

SIC or Designated Activity Code: Primary: 1499 **2nd:** _____ **3rd:** _____ **4th:** _____

If You Have Other Existing UPDES Permits, Enter Permit #'s: _____

IV. SECTOR IDENTIFICATION: The General Multi-Sector Permit covers all industrial activity that is required by law to be covered by a storm water permit. On the following pages the sectors are listed with a description of the industrial activity that is covered by that sector. Please check each sector that covers industrial activities which occur at your site. The sector covered in Appendix AD is the catch-all sector and should only be used if positively no other sector covers your industrial activity. If you should select AD, please call the Storm Water Coordinator at DWQ to discuss the need for choosing Sector AD (Non-Classified Facilities).

☐ A. Timber Products Facilities -- establishments [generally classified under Standard Industrial Classification (SIC) Major Group 24] that are engaged in cutting timber and pulpwood, merchant sawmills, lath mills, shingle mills, cooperage stock mills, planing mills, and plywood and veneer mills engaged in producing lumber and wood basic materials; and establishments engaged in wood preserving or in manufacturing finished articles made entirely of wood or related materials, except for wood kitchen cabinet manufacturers (SIC Code 2434), which are addressed under sector W.

☐ B. Paper and Allied Products Manufacturing Facilities -- facilities engaged in the manufacture of pulps from wood and other cellulose fibers and from rags; the manufacture of paper and paperboard into converted products, such as paper coated off the paper machine, paper bags, paper boxes and envelopes; and establishments primarily engaged in manufacturing bags of plastic film and sheet. These facilities are commonly identified by Standard Industrial Classification (SIC) Major Group 26.

☐ C. Chemical and Allied Products Manufacturing Facilities -- 1) Basic industrial inorganic chemicals (including SIC 281), 2) Plastic materials and synthetic resins, synthetic rubbers, and cellulosic and other humanmade fibers, except glass (including SIC 282), 3) Soap and other detergents and in producing glycerin from vegetable and animal fats and oils; specialty cleaning, polishing, and sanitation preparations; surface active preparations used as emulsifiers, wetting agents, and finishing agents, including sulfonated oils; and perfumes, cosmetics, and other toilet preparations (including SIC 284), 4) Paints (in paste and ready-mixed form); varnishes; lacquers; enamels and shellac; putties, wood fillers, and sealers; paint and varnish removers; paint brush cleaners; and allied paint products (including SIC 285), 5) Industrial organic chemicals (including SIC 286), 6) Nitrogenous and phosphatic basic fertilizers, mixed fertilizer, pesticides, and other agricultural chemicals (including SIC 287), 7) Industrial and household adhesives, glues, caulking compounds, sealants, and linoleum, tile, and rubber cements from vegetable, animal, or synthetic plastics materials; explosives; printing ink, including gravure ink, screen process ink, and lithographic; miscellaneous chemical preparations, such as fatty acids, essential oils, gelatin (except vegetable), sizes, bluing, laundry sours, writing and stamp pad ink, industrial compounds, such as boiler and heat insulating compounds, metal, oil, and water treatment compounds, waterproofing compounds, and chemical supplies for foundries (including facilities with SIC 289), 8) Ink and paints, including china painting enamels, india ink, drawing ink, platinum paints for burnt wood or leather work, paints for china painting, artists' paints and artists' water colors (SIC 3952, limited to those listed; for others see sectorY.), 9) Medicinal chemicals and pharmaceutical products, including the grading grinding and milling of botanicals (including SIC 283).

☐ D. Asphalt Paving, Roofing Materials, and Lubricant Manufacturing Facilities -- 1) facilities engaged in manufacturing asphalt paving and roofing materials, including those facilities commonly identified by Standard Industrial Classification (SIC) codes 2951 and 2952, 2) portable asphalt plant facilities (also commonly identified by SIC code 2951), 3) facilities engaged in manufacturing lubricating oils and greases, including those facilities classified as SIC code 2992. Not covered are: 1) petroleum refining facilities, including those that manufacture asphalt or asphalt products and that are classified as SIC code 2911 (see sector I.), 2) oil recycling facilities (see sector N.), and 3) fats and oils rendering (see sectorU.).

☐ E. Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities -- manufacturing flat, pressed, or blown glass or glass containers; manufacturing hydraulic cement; manufacturing clay products including tile and brick; manufacturing of pottery and porcelain electrical supplies; manufacturing concrete products; manufacturing gypsum products; nonclay refractories; and grinding or otherwise treating minerals and earths. This section generally includes the following types of manufacturing operations: flat glass, (SIC code 3211); glass containers, (SIC code 3221); pressed and blown glass, not elsewhere classified, (SIC code 3229); glass products made of purchased glass (SIC code 3231) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water; hydraulic cement, (SIC code 3241); brick and structural clay tile, (SIC code 3251); ceramic wall and floor tile, (SIC code 3253); clay refractories, (SIC code 3255); structural clay products not elsewhere classified (SIC code 3259); vitreous china plumbing fixtures, and china and earthen ware fittings and bathroom accessories (SIC code 3261); vitreous china table and kitchen articles (SIC code 3262); fine earthenware table and kitchen articles (SIC code 3263); porcelain electrical supplies, (SIC code 3264); pottery products, (SIC code 3269); concrete block and brick, (SIC code 3271); concrete products, except block and brick (SIC code 3272); ready-mix concrete, (SIC code 3273); lime (SIC code 3274); gypsum products, (SIC code 3275); cut stone and stone products (SIC code 3281); abrasive products (SIC code 3291); asbestos products (SIC code 3292); minerals and earths, ground or otherwise treated, (SIC code 3295); mineral wool (SIC code 3296); nonclay refractories, (SIC code 3297); and nonmetallic mineral products not elsewhere classified (SIC code 3299.

☐ F. Primary Metals Facilities -- coking operations, sintering plants, blast furnaces, smelting operations, rolling mills, casting operations, heat treating, extruding, drawing, or forging of all types of ferrous and nonferrous metals, scrap, and ore. Coverage includes the following types of facilities: 1) Steel works, blast furnaces, and rolling and finishing mills including: steel wiredrawing and steel nails and spikes; cold-rolled steel sheet, strip, and bars; and steel pipes and tubes (SIC code 331), 2) Iron and steel foundries, including: gray and ductile iron, malleable iron, steel investment, and steel foundries not elsewhere classified (SIC code 332), 3) Primary smelting and refining of nonferrous metals, including: primary smelting and refining of copper, and primary production of aluminum (SIC code 333), 4) Secondary smelting and refining of nonferrous metals (SIC code 334), 5) Rolling, drawing, and extruding of nonferrous metals, including: rolling, drawing, and extruding of copper; rolling, drawing, and extruding of nonferrous metals, except copper and aluminum; and drawing and insulating of nonferrous wire (SIC code 335), 6) Nonferrous foundries (castings), including: aluminum die-castings, nonferrous die-castings, except aluminum, aluminum foundries, copper foundries, and nonferrous foundries, except copper and aluminum (SIC code 336), 7) Miscellaneous primary metal products, not elsewhere classified, including: metal heat treating, and primary metal products, not elsewhere classified (SIC code 339).

☐ G. Metal Mines (Ore Mining and Dressing) -- active and inactive metal mining and ore dressing facilities [Standard Industrial Classification (SIC) Major Group 10] if the storm water has come into contact with, or is contaminated by, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the operation. SIC Major Group 10 includes establishments primarily engaged in mining, developing mines, or exploring for metallic minerals (ores) and also includes all ore dressing and beneficiating operations, whether performed at mills operated in conjunction with the mines served or at mills, such as custom mills, operated separately. For the purposes of this part of the permit, the term "metal mining" includes all ore mining and/or dressing and beneficiating operations, whether performed at mills operated in conjunction with the mines served or at mills, such as custom mills, operated separately. All storm water discharges from inactive metal mining facilities and the storm water discharges from the following areas of active, and temporarily inactive, metal mining facilities are the only discharges covered by this section of the permit: topsoil piles; offsite haul/access roads if off active area; onsite haul roads if not constructed of waste rock or if spent ore and mine water is not used for dust control; runoff from tailings dams/dikes when not constructed of waste rock/tailings and no process fluids are present; concentration building, if no contact with material piles; mill site, if no contact with material piles; chemical storage area; docking facility, if no excessive contact with waste product; explosive storage; reclaimed areas released from reclamation bonds prior to December 17, 1990; and partially/inadequately reclaimed areas or areas not released from reclamation bonds. Not covered are: 1) active metal mining facilities that are subject to the effluent limitation guidelines for the Ore Mining and Dressing Point Source Point Source Category (40 CFR Part 440). Coverage under this permit does not include adit drainage or contaminated springs or seeps at active facilities, temporarily inactive facilities, or inactive facilities. Also see permit conditions, Limitations on Coverage, *Part I.B.3.* 2) Storm water discharges associated with an industrial activity that the *Executive Secretary* has determined to be, or may reasonably be expected to be, contributing to a violation of a water quality standard, 3) Storm water discharges associated with industrial activity from inactive mining operations occurring on Federal lands where an operator cannot be identified.

☐ H. Coal Mines and Coal Mine-Related Facilities -- coal mining-related areas (SIC Major Group 12) if they are not subject to effluent limitations guidelines under *40 CFR Part 434*. Not covered are: inactive mining activities occurring on Federal lands where an operator cannot be identified.

☐ I. Oil and Gas Extraction Facilities -- oil and gas facilities listed under Standard Industrial Classification (SIC) Major Group 13 which are required to be permitted under *UAC R317-8-3.8(2)(a)3.* These include oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden raw material, intermediate products, finished products, by-products or waste products

located on the site of such operations.' Industries in SIC Major Group 13 include the extraction and production of crude oil, natural gas, oil sands and shale; the production of hydrocarbon liquids and natural gas from coal; and associated oil field service, supply and repair industries. This section also covers petroleum refineries listed under SIC code 2911. Contaminated storm water discharges from petroleum refining or drilling operations that are subject to nationally established BAT or BPT guidelines found at *40 CFR 419* and *435* respectively are not included. [Note that areas eligible for coverage at petroleum refineries will be very limited because the term ``contaminated runoff," as defined under *40 CFR 419.11*, includes ``... runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property." Areas at petroleum refineries which may be eligible for permit coverage, provided discharges from these areas are not co-mingled with ``contaminated runoff," include: vehicle and equipment storage, maintenance and refueling areas. Most areas at refineries will not be eligible for coverage including: raw material, intermediate product, by-product, waste material, chemical, and material storage areas; loading and unloading areas; transmission pipelines, and, processing areas.] Not covered are: inactive oil and gas operations occurring on Federal lands where an operator cannot be identified are not covered by this permit.

☒ J. Mineral Mining and Processing Facilities -- active and inactive mineral mining and processing facilities (generally identified by Standard Industrial Classification (SIC) Major Group 14). Not covered are: 1) facilities associated with industrial activity which are subject to an existing effluent limitation guideline (*40 CFR Part 436*), 2) inactive mineral mining activities occurring on Federal lands where an operator cannot be identified are not eligible for coverage under this permit.

☐ K. Hazardous Waste Treatment Storage or Disposal Facilities -- facilities that treat, store, or dispose of hazardous wastes, including those that are operating under interim status or a permit under subtitle C of RCRA. [Disposal facilities that have been properly closed and capped, and have no significant materials exposed to storm water, are considered inactive and do not require permits (*UAC R317-8-3.8(6)(c)*).]

☐ L. Landfills and Land Application Sites -- waste disposal at landfills, land application sites, and open dumps that receive or have received industrial wastes. Open dumps are solid waste disposal units that are not in compliance with Sate/Federal criteria established under RCRA Subtitle D. Not covered are: inactive landfills, land application sites, and open dumps occurring on Federal lands where an operator cannot be identified.

☐ M. Automobile Salvage Yards -- facilities engaged in dismantling or wrecking used motor vehicles for parts recycling or resale and for scrap (SIC Code 5015).

☐ N. Scrap Recycling and Waste Recycling Facilities -- facilities that are engaged in the processing, reclaiming and wholesale distribution of scrap and waste materials such as ferrous and nonferrous metals, paper, plastic, cardboard, glass, animal hides (these types of activities are typically identified as SIC code 5093). Facilities that are engaged in reclaiming and recycling liquid wastes such as used oil, antifreeze, mineral spirits, and industrial solvents (also identified as SIC code 5093) are also covered under this section. Separate permit requirements have been established for recycling facilities that only receive source-separated recyclable materials primarily from non-industrial and residential sources (also identified as SIC 5093) (e.g., common consumer products including paper, newspaper, glass, cardboard, plastic containers, aluminum and tin cans). This includes recycling facilities commonly referred to as material recovery facilities (MRF).

☐ O. Steam Electric Power Generating Facilities -- steam electric power generating facilities, including coal handling areas. Non-storm water discharges subject to effluent limitations guidelines are not covered by this permit. Storm water discharges from coal pile runoff subject to numeric limitations are eligible for coverage under this permit, but are subject to the limitations established by *40 CFR 423*. Not covered are: ancillary facilities such as fleet centers, gas turbine stations, and substations that are not contiguous to a steam electric power generating facility are not covered by this permit. Heat capture co-generation facilities are not covered by this permit; however, dual fuel co-generation facilities are included.

☐ P. Vehicle Maintenance or Equipment Cleaning areas at Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, the United States Postal Service, or Railroad Transportation Facilities -- ground transportation facilities and rail transportation facilities (generally identified by Standard Industrial Classification (SIC) codes 40, 41, 42, 43, and 5171), that have vehicle and equipment maintenance shops (vehicle and equipment rehabilitation, mechanical repairs, painting, fueling and lubrication) and/or equipment cleaning operations are eligible for coverage under this section. Also covered under this section are facilities found under SIC code 4221-4225 (public warehousing and storage) that do not have vehicle and equipment maintenance shops and/or equipment cleaning operations but have areas (exclusive of access roads and rail lines) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products or industrial machinery are exposed to storm water.

☐ Q. Vehicle Maintenance Areas and Equipment Cleaning Areas of Water Transportation Facilities -- water transportation facilities that have vehicle (vessel) maintenance shops and/or equipment cleaning operations. The water transportation industry includes facilities engaged in foreign or domestic transport of freight or passengers in deep sea or inland waters; marine cargo handling operations; ferry operations; towing and tugboat services; and marinas (facilities commonly identified by SIC code Major Group 44).

☐ R. Ship or Boat Building and Repair Yards -- facilities engaged in ship building and repairing and boat building and repairing (SIC code 373).

☐ S. Vehicle Maintenance Areas, Equipment Cleaning Areas or Airport Deicing Operations located at Air Transportation Facilities -- establishments and/or facilities including airports, air terminals, air carriers, flying fields, and establishments engaged in servicing or maintaining airports and/or aircraft (generally classified under Standard Industrial Classification (SIC) code 45) which have vehicle maintenance shops, material handling facilities, equipment cleaning operations or airport and/or aircraft deicing/anti-icing operations. For the purpose of this permit, the term "deicing" is defined as the process to remove frost, snow, or ice and "anti-icing" is the process which prevents the accumulation of frost, snow, or ice. Only those portions of the facility or establishment that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or deicing/anti-icing operations are addressed under this section.

☐ T. Wastewater Treatment Works -- treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including lands dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of 1.0 MGD or more, or required to have an approved pretreatment program under *40 CFR Part 403*.

☐ U. Food and Kindred Products Facilities -- food and kindred products processing facilities (commonly identified by Standard Industrial Classification (SIC) code 20), including: meat products; dairy products; canned, frozen and preserved fruits, vegetables, and food specialties; grain mill products; bakery products; sugar and confectionery products; fats and oils; beverages; and miscellaneous food preparations and kindred products and tobacco products manufacturing (SIC Code 21), except for storm water discharges identified under paragraph I.B.3. where industrial plant yards; material handling sites; refuse sites; sites used for application or disposal of process wastewaters; sites used for storage and maintenance of material handling equipment; sites used for residential treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; and storage areas for raw material and intermediate and finished products are exposed to storm water and areas where industrial activity has taken place in the past and significant materials remain. For the purposes of this paragraph, material handling activities include the storage, loading, and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product.

☐ V. Textile Mills, Apparel and other Fabric Product Manufacturing Facilities -- Textile Mill Products, of and regarding facilities and establishments engaged in the preparation of fiber and subsequent manufacturing of yarn, thread, braids, twine, and cordage, the manufacturing of broad woven fabrics, narrow woven fabrics, knit fabrics, and carpets and rugs from yarn; processes involved in the dyeing and finishing of fibers, yarn fabrics, and knit apparel; the integrated manufacturing of knit apparel and other finished articles of yarn; the manufacturing of felt goods (wool), lace goods, nonwoven fabrics; miscellaneous textiles, and other apparel products (generally described by SIC codes 22 and 23). This section also covers facilities engaged in manufacturing finished leather and artificial leather products (SIC 31, except 3111).

☐ W. Furniture and Fixture Manufacturing Facilities -- facilities involved in the manufacturing of: wood kitchen cabinets (generally described by SIC code 2434); household furniture (generally described by SIC code 251); office furniture (generally described by SIC code 252); public buildings and related furniture (generally described by SIC code 253); partitions, shelving, lockers, and office and store fixtures (generally described by SIC code 254); and miscellaneous furniture and fixtures (generally described by SIC code 259).

☐ X. Printing and Publishing Facilities -- newspaper, periodical, and book publishing or publishing and printing (SIC Codes 2711-2731); book printing (SIC Code 2732); miscellaneous publishing (SIC Code 2741); commercial printing, lithographic (SIC Code 2752); commercial printing, gravure (SIC Code 2754); commercial printing, not elsewhere classified (SIC Code 2759); manifold business forms, greeting cards, bankbooks, looseleaf binders and devices, bookbinding and related work, and typesetting (SIC Codes 2761-2791); and, plate making and related services (SIC Code 2796).

☐ Y. Rubber and Miscellaneous Plastic Product Manufacturing Facilities -- rubber and miscellaneous plastic products manufacturing facilities (SIC major group 30) and miscellaneous manufacturing industries, except jewelry, silverware, and plated ware (SIC major group 39, except 391).

☐ Z. Leather Tanning and Finishing Facilities -- leather tanning, currying and finishing (commonly identified by Standard Industrial Classification (SIC) code 3111). Discharges from facilities that make fertilizer solely from leather scraps and leather dust are also covered under this section.

☐ AA. Facilities That Manufacture Metal Products including Jewelry, Silverware and Plated Ware -- fabricated metals industry listed below, except for electrical related industries: fabricated metal products, except machinery and transportation equipment, SIC 34, and jewelry, silverware, and plated ware (SIC Code 391).

☐ AB. Facilities That Manufacture Transportation Equipment, Industrial or Commercial Machinery -- transportation equipment, industrial or commercial machinery manufacturing facilities (commonly described by SIC Major Group 35 except SIC 357, and SIC Major Group 37, except SIC 373). Common activities include: industrial plant yards; material handling sites; refuse sites; sites used for application or disposal of process wastewaters; sites used for storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas for raw material and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

☐ AC. Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods -- facilities that manufacture: electronic and other electrical equipment and components, except computer equipment (SIC major group 36);measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks (SIC major group 38) and computer and office equipment (SIC code 357).

☐ AD. Non-Classified Facilities --facilities that meet the definition of storm water associated with industrial activity (*UAC R317-8-3.8(6)(c) & (d)*, except for construction activities as defined under *UAC R317-8-3.8(6)(d)10.*) but, can not be classified in another industrial sector (i.e., sectors A to AC), and are not excluded from permit coverage elsewhere in this permit; or, the *Executive Secretary* has designated as needing a storm water permit under *UAC R317-8-3.8(1)(a)5.* Should conditions at a facility covered by this section change and industrial activities in another section(s) contained in sectors A to AC apply, the facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to those contained in this section. The monitoring and pollution prevention plan terms and conditions of this permit are additive for industrial activities being conducted at the same industrial facility (co-located industrial activities). The operator of the facility shall determine which monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

V. CERTIFICATION: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: Karen Palmer **Date:** 11-26-08

Signature: Karen Palmer **Amount of Permit Fee Enclosed: $** 500.00

WHO MUST FILE A NOTICE OF INTENT (NOI) FORM

State law at UAC R317-8-3.8 prohibits point source discharges of storm water associated with industrial activity to a water body(ies) of the State without a Utah Pollutant Discharge Elimination System (UPDES) permit. The operator of an industrial activity that has such a storm water discharge must submit a NOI to obtain coverage under the UPDES Multi-Sector Storm Water General Permit. If you have questions about whether you need a permit under the UPDES Storm Water program, contact (801) 538-6146.

APPROVED

DIV. OIL GAS & MINING

INSTRUCTIONS

NOTICE OF INTENT (NOI) FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY TO BE COVERED UNDER THE UPDES GENERAL PERMIT

WHERE TO FILE THE NOI FORM

NOIs, with fee payment(s), must be sent to the following address:

Department of Environmental Quality
Division of Water Quality
P.O. Box 144870
Salt Lake City, UT 84114-4870

COMPLETING THE NOI FORM

You must type or print, using upper-case letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions on this form, call (801) 538-6146.

BEGINNING OF COVERAGE

Storm Water General Permits are drafted to cover a facility quickly avoiding delays, therefore there is no waiting time to receive coverage. The permittee should be aware that though you may not have a permit in hand, if you have submitted a completed NOI with the permit fee you are covered by the permit and will be expected to conform to the conditions in the permit. If you wish you may contact the Division of Water Quality at (801) 538-6146, to receive a generic copy of the permit. After we receive the NOI and the permit fee we will send you an official copy of the permit including your specific permit number.

PERMIT FEES(*MAKE CHECK PAYABLE TO: DIVISION OF WATER QUALITY*)

The permit fee is $500 (or is prorated) and it must be submitted with the NOI to authorize immediate coverage under the permit (except in the case of a state or local political subdivision which are exempt from the permit fee). This provides five years of coverage under the permit (unless prorated). It is our policy to prorate the permit fee for temporary discharges. Fees are prorated at $8.34 per month of coverage needed. The minimum fee is $100 for up to 12 months of coverage, additional months are calculated at $8.34 each.

Permittees that have a new facility that began operating after the date that the Multi-Sector General Permit was issued, will be prorated from the day they began operations until the expiration date of the Permit.

GENERAL INFORMATION

Facilities within municipalities (such as Salt Lake City or Salt Lake County) that have been issued Municipal Storm Water Permits by DWQ must contact that city or the county and notify them of the new permit status for the facility. If you have questions that have not been answered above, or need an NOI for construction activities, please contact the Storm Water Coordinator, Division of Water Quality, at (801) 538-6146.

SECTION I - FACILITY OPERATOR INFORMATION

Give the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in this application. The name of the operator may or may not be the same as the name of the facility. The responsible party is the legal entity that controls the facility's operation, rather than the plant or site manager. Do not use a colloquial name. Enter the complete address and telephone number of the operator.
Enter the appropriate letter to indicate the legal status of the operator of the facility.

F = Federal M = Public (other than Fed or State)
S = State P = Private

A contact person is someone that we may contact, that has knowledge of the facility and permit conditions, but not necessarily the person with signatory responsibility.

SECTION II - FACILITY/SITE LOCATION INFORMATION

Enter the facility's or site's official or legal name and complete street address, including city, state and ZIP code. If the facility or site lacks a street address, indicate the state, the latitude and longitude of the facility to the nearest 15 seconds, or the quarter, section, township, and range (to the nearest quarter section) of the approximate center of the site.

Indicate whether the facility is located on Indian Lands. If the facility is located on Indian Lands, EPA form 3510-6 should be used and submitted to EPA Region VIII except for facilities on the Navajo Reservation or on the Goshute Reservation which should submit EPA form 3510-6 to Region IX.

SECTION III - SITE ACTIVITY INFORMATION

If the storm water discharges to a municipal separate sewer system, enter the name of the operator of the municipality (e.g., municipality name, county name) and the receiving water of the discharge from the municipal storm sewer if it is known. (A municipal separate storm sewer system (MS4) is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by a state, city, town, county, district, association or other public body which is designed or used for collecting or conveying storm water).

If the facility discharges storm water directly to receiving water(s), enter the name of the receiving water.

Indicate whether or not the owner or operator of the facility has existing quantitative data that represent the characteristics and concentration of pollutants in storm water discharges.

To answer the questions concerning analytical or visual monitoring you must examine a copy of the permit, Part V. and the sectors (in the appendix) that your facility will fall into. Upon examination you will be able to determine your monitoring and reporting (whether data must be submitted or retained in a storm water pollution prevention plan file) requirements.

A facility is an existing facility if it has been in operation, it is a new facility if it has not begun operation but is about to

List, in descending order of significance, up to four 4-digit standard industrial classification (SIC) codes that best describe the principal products or services provided at the facility or site identified in Section II of the application.

For industrial activities defined in UAC 317-8-3.8(6)(c) & (d)1 to 11. that do not have SIC codes that accurately describe the principal products produced or services provided, the following 2-character codes are to be used:

HZ = Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA [UAC R317-8-3.8(6)(d)4.];

LF = Landfills, land application sites, and open dumps that receive or have received any industrial wastes, including those that are subject to regulation under subtitle D of RCRA [UAC R317-8-3.8(6)(d)5.];

SE = Steam electric power generating facilities, including coal handling sites [UAC R317-8-3.8(6)(d)7];

TW = Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage [UAC R317-8-3.8(6)(d)9.].

If there are other UPDES permits presently issued for the facility or site listed in Section II, list the permit numbers. If an application for the facility has been submitted but no permit number has been assigned, enter the application number.

SECTION IV - SECTOR IDENTIFICATION

Select and check all the boxes indicating the sectors that describe activities that occur at the site described in section II.

SECTION V - CERTIFICATION

State statutes provide for severe penalties for submitting false information on this application form. State regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor; or
For a municipality, state, Federal, or other public facility: by either a principal executive officer or ranking elected official.

STATE OF UTAH, DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER QUALITY
288 North 1460 West, PO Box 144870, Salt Lake City, Utah 84114-4870 (801) 538-6146

NOT

Notice of Termination (NOT) for Storm Water Discharges Associated with Industrial Activity Under the UPDES General Multi-Sector Permit. **INSTRUCTIONS ON BACK**

Submission of this Notice of Termination constitutes notice that the party identified in Section II of this form is no longer authorized to discharge storm water associated with industrial activity under the UPDES program. ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM.

I. Permit Information

UPDES Storm Water General Permit Number:

Check Here if You are No Longer the Operator of the Facility: ☐ Check Here if the Storm Water Discharge is Being Terminated: ☐

II. Facility Operator Information

Name: Phone:

Address:

City: State: Zip: -

III. Facility Site/Location Information

Name:

Address: County:

City: State: Zip: -

Latitude: ° ' " Longitude: ° ' " Quarter: Section: Township: Range:

IV. Certification: I certify under penalty of law that all storm water discharges associated with industrial activity from the identified facility that are authorized by a UPDES general permit have been eliminated or that I am no longer the operator of the industrial activity. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with industrial activity under this general permit, and that discharging pollutants in storm water associated with industrial activity to waters of the State is unlawful under the State of Utah Water Quality Act where the discharge is not authorized by a UPDES permit. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violations of this permit or the Water Quality Act.

Print Name: Date:

Signature:

Instructions for Completing Notice of Termination (NOT) Form

Who May File A Notice Of Termination (NOT) Form

Permittees who are presently covered under the State issued Utah Pollutant Discharge Elimination System (UPDES) General Multi-Sector Permit for Storm Water Discharges Associated with Industrial Activity may submit a Notice of Termination (NOT) form when their facilities no longer have any storm water discharges associated with industrial activity as defined in the storm water regulations at UAC R317-8-3.8(b)(c) and (d), or when they are no longer the operator of the facilities.

Where to File NOT Form
Send this form to the following address:

Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870

APPROVED

PLEASE SEE THE REVERSE SIDE OF THIS FORM FOR FURTHER INSTRUCTIONS

DIV. OIL GAS & MINING

Instructions
Notice of Termination (NOT) of Coverage Under the UPDES General Multi-Sector Permit
for Storm Water Discharges Associated With Industrial Activity

Completing the Form

Type or print, using upper-case letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions about this form, call the Division of Water Quality at (801) 538-6146.

Section I - Permit Information

Enter the existing UPDES Storm Water General Permit number assigned to the facility or site identified in Section III. If you do not know the permit number, contact the Division of Water Quality at (801) 538-6146.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box:

If there has been a change of operator and you are no longer the operator of the facility or site identified in Section III, Check the corresponding box.

If all storm water discharges at the facility or site identified in Section III have been terminated, check the corresponding box.

Section II - Facility Operator Information

Give the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in this application. The name of the operator may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility's operation, rather that the plant or site manager. Do not use a colloquial name. Enter the complete address and telephone number of the operator.

Section III - Facility/Site Location Information

Enter the facility's or site's official or legal name and complete address, including city, state and ZIP code. If the facility lacks a street address, indicate the state, the latitude and longitude of the facility to the nearest 15 seconds, or the quarter, section, township, and range (to the nearest quarter section) of the approximate center of the site.

Section IV - Certification

State statues provide for severe penalties for submitting false information on this application form. State regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor; or

For a municipality, State, Federal, or other public facility: by either a principal executive officer or ranking elected official.

APPENDIX B

Table 1. Storm Water Pollution Prevention Team

Name	*Title*	*Responsibility*
Karen Palmer	President	Corporate signatory authority; review and implementation of the SWPPP.
Clint Hennie Boe Harward		Onsite coordination of all stages of project development and implementation of the SWPPP. This designee is responsible for updating and modifying the plan, as well as report review and submittal.
Clint Hennie Boe Harward		Responsible for monitoring, site inspections, record-keeping, and reporting. Completes analysis of monitoring data and recommends new BMPs if required. This individual is also responsible for employee training.
Clint Hennie Boe Harward		Responsible for implementing storm water pollution prevention maintenance program, oversees good housekeeping practices and construction of structural BMPs.

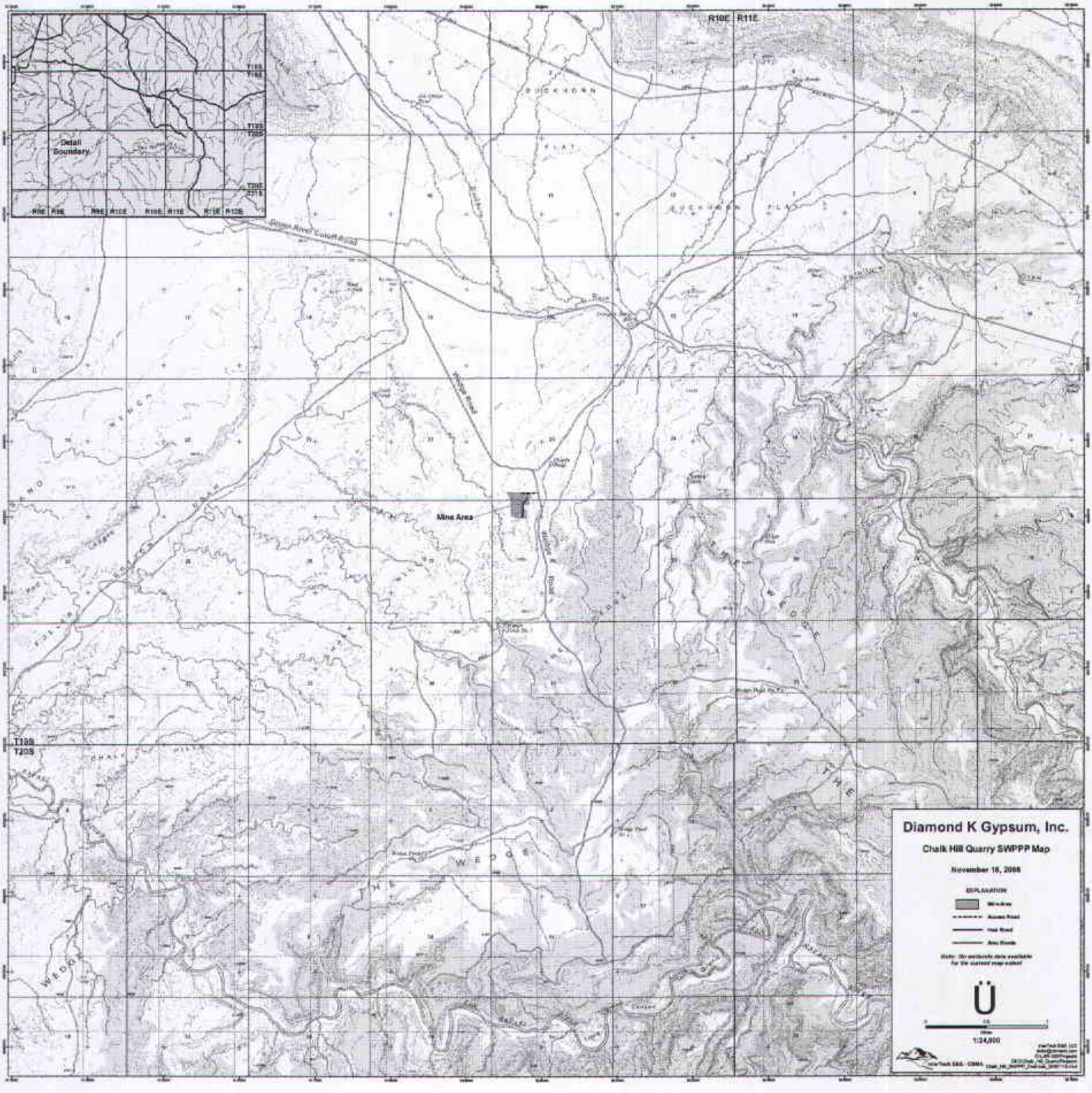
Table 2. Summary of Potential Pollution Sources

Area	**Pollutant**	**Method of Exposure**
Active Mining	Total Suspended Solids	Open pit mining operation.
Top soil and non-salable gypsum stockpiles	Total Suspended Solids	Stored in non-producing area of mine.
Access Road and Haul Road	Total Suspended Solids Fuel, Oil and Grease	TSS from trafficking, fuel and oil from vehicle leaks or spills incorporated into storm water runoff.
Fueling area	Fuel, Oil and Grease	Leaks or spills incorporated into storm water runoff.
Salable Gypsum stockpiles	Total Suspended Solids	Stored in mining area prior to loading on truck transport.
Sanitary Facilities	Contents of Port-a-Potty	Tipping due to high winds. Leakage.

APPENDIX C

Figure 1. Over View and Drainage Map

Figure 2. Detail and BMP Map



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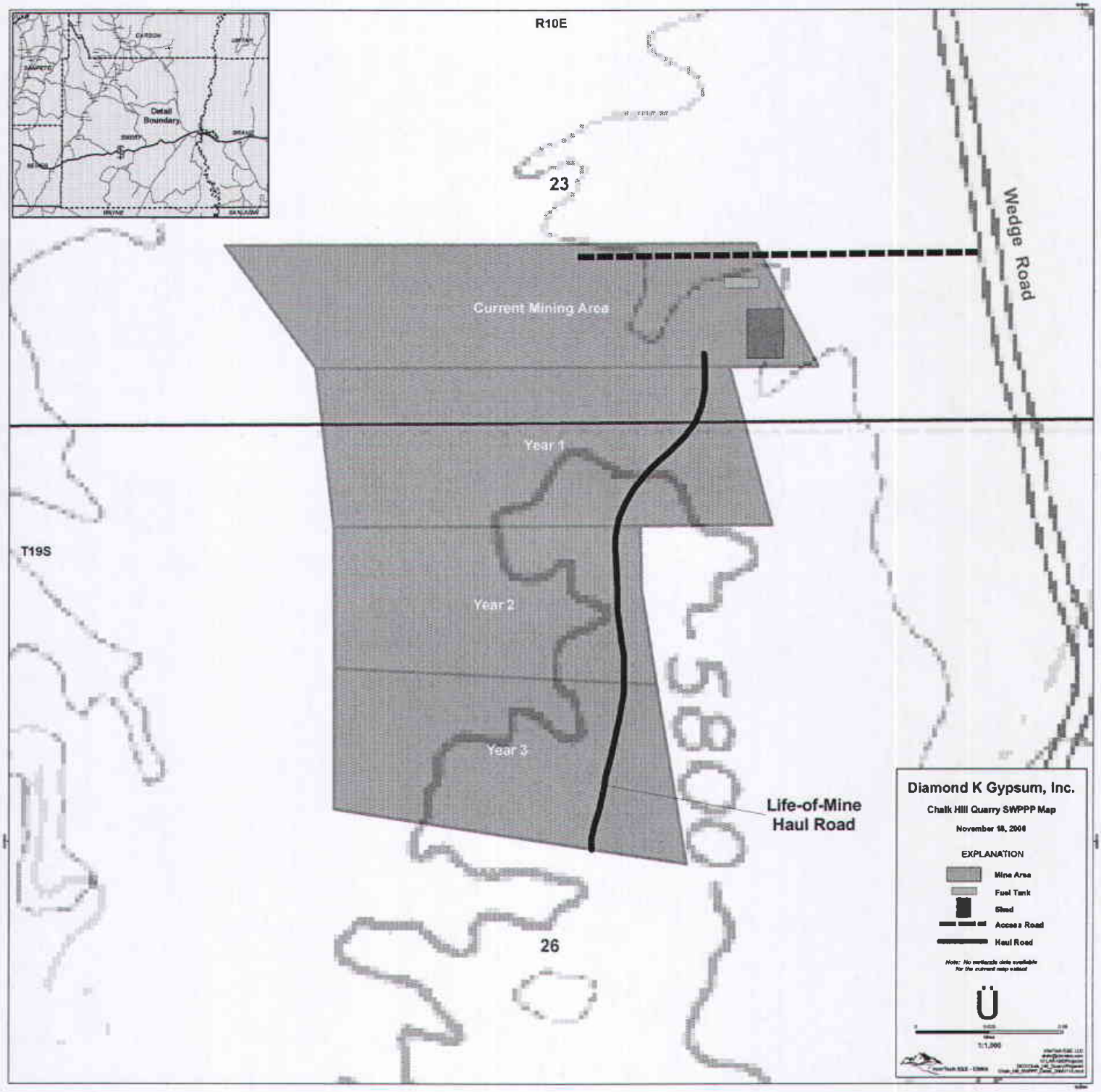

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AUG 1 : 2009

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APPENDIX D

Utah SWPPP General Industrial Permit

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PART I
Permit No.: UTR000000

I. COVERAGE UNDER THIS PERMIT.

A. Overview of the Multisector General Permit. *Parts I. - VIII.* apply to all facilities. *Parts I.* describe eligibility requirements. *Parts II. - VIII.* contain "basic" permit requirements.

Appendix I contains forms for application or termination of the permit and procedures to do such.

Appendix II. provides additional requirements for particular sectors of industrial activity. For example, primary metal facilities add *Appendix II.F*, to the "universal" *Parts I. - VIII.* requirements.

Appendix III contains a list of *EPCRA Section 313* "water priority chemicals".

Some facilities may have "co-located" activities that are described in more than one sector and need to comply with applicable conditions of each sector contained in the *Appendix*. For example, a chemical manufacturing facility could have a land application site and be subject to *Appendix II.C.* - Chemical and Allied Products Manufacturing sector (primary activity), with runoff from the land application site (co-located activity) also subject to conditions in the *Appendix II.L.* - Landfills and Land Application Sites sector.

B. Permit Area. The permit covers all areas of the State of Utah except for Indian lands[1].

C. Eligibility

1. Discharges Covered. Except for storm water discharges identified under *Part I.D.*, this permit may cover all new and existing point source discharges of storm water to waters of the State that are associated with industrial activity identified under the coverage sections contained in *Appendix II.* (see Table 1). Military installations must comply with the permit and monitoring requirements for all sectors that describe industrial activities that such installations perform.

TABLE 1.

Storm Water Discharges From:	Are Covered if Listed in Appendix:
Timber Products Facilities	II.A.1.

[1] The State of Utah, *Division of Water Quality*, does not have permit authority for Indian lands. Storm water permits for Indian lands within the State must be acquired through EPA Region VIII, except for facilities on the Navajo Reservation or on the Goshute Reservation which must acquire storm water permits through EPA Region IX.

Storm Water Discharges From:	Are Covered if Listed in Appendix:
Paper and Allied Products Manufacturing Facilities	II.B.1.
Chemical and Allied Products Manufacturing Facilities	II.C.1.
Asphalt Paving, Roofing Materials, and Lubricant Manufacturing Facilities	II.D.1.
Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities	II.E.1.
Primary Metals Facilities	II.F.1.
Metal Mines (Ore Mining and Dressing)	II.G.1.
Coal Mines and Coal Mine-Related Facilities	II.H.1.
Oil or Gas Extraction Facilities	II.I.1.
Mineral Mining and Processing Facilities	II.J.1.
Hazardous Waste Treatment Storage or Disposal Facilities	II.K.1.
Landfills and Land Application Sites	II.L.1.
Automobile Salvage Yards	II.M.1.
Scrap Recycling and Waste Recycling Facilities	II.N.1.
Steam Electric Power Generating Facilities	II.O.1.
Vehicle Maintenance or Equipment Cleaning areas at Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, the United States Postal Service, or Railroad Transportation Facilities	II.P.1.
Vehicle Maintenance Areas and Equipment Cleaning Areas of Water Transportation Facilities	II.Q.1.
Ship or Boat Building and Repair Yards	II.R.1.
Vehicle Maintenance Areas, Equipment Cleaning Areas or From Airport Deicing Operations located at Air Transportation Facilities	II.S.1.
Wastewater Treatment Works	II.T.1.
Food and Kindred Products Facilities	II.U.1.
Textile Mills, Apparel and other Fabric Product Manufacturing Facilities	II.V.1.
Furniture and Fixture Manufacturing Facilities	II.W.1.
Printing and Publishing Facilities	II.X.1.

Storm Water Discharges From:	Are Covered if Listed in Appendix:
Rubber and Miscellaneous Plastic Product Manufacturing Facilities	II.Y.1.
Leather Tanning and Finishing Facilities	II.Z.1.
Facilities That Manufacture Metal Products including Jewelry, Silverware and Plated Ware	II.AA.1.
Facilities That Manufacture Transportation Equipment, Industrial or Commercial Machinery	II.AB.1.
Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods	II.AC.1.
Non-Classified Facilities	II.AD.1

2. Construction. This permit may authorize storm water discharges associated with industrial activity that are mixed with storm water discharges associated with construction activities provided that the storm water discharge from the construction activity is authorized by and in compliance with the terms of the *UPDES Storm Water General Permit for Construction Activity*, General Permit Number UTR100000.

3. Storm Water Not Associated With Industrial Activity. Storm water discharges associated with industrial activity that are authorized by this permit may be combined with other sources of storm water that are not classified as associated with industrial activity pursuant to *Utah Administrative Code (UAC) R317-8-3.8(6)(c) & (d)* (see also the definition of "storm water discharge associated with industrial activity", *Part VIII.A.21*).

4. Discharges Subject to New Source Performance Standards. Operators of facilities with storm water discharges subject to New Source Performance Standards[2] shall have documentation of a final *DWQ* decision indicating that the *DWQ* has determined that the storm water discharge will have no direct or indirect impact on the affected receiving waters

[2]Storm water discharges subject to New Source Performance Standards (NSPS) and that may be covered under this permit include: runoff from material storage piles at cement manufacturing facilities [40 CFR Part 411 Subpart C (established February 23, 1977)]; contaminated runoff from phosphate fertilizer manufacturing facilities [40 CFR Part 418 Subpart A (established April 8, 1974)]; coal pile runoff at steam electric generating facilities [40 CFR Part 423 (established November 19, 1982)]; and runoff from asphalt emulsion facilities [40 CFR Part 443 Subpart A (established July 24, 1975)]. NSPS apply only to discharges from those facilities or installations that were constructed after the promulgation of NSPS. For example, storm water discharges from areas where the production of asphalt paving and roofing emulsions occurs are subject to NSPS only if the asphalt emulsion facility was constructed after July 24, 1975.

of the State. This documentation shall be obtained and retained on site by 180 days after the submittal of the Notice of Intent. The information shall be sent to the appropriate address listed in *Part V.B.* of this permit.

D. Limitations on Coverage. The following storm water discharges associated with industrial activity are **not** authorized by this permit:

1. Storm water discharges associated with industrial activities that are not listed under the coverage sections contained in *Appendix II.* (see Table 1).

2. Storm water discharges subject to New Source Performance Standards except as provided in *Part I.C.4.*

3. Storm water discharges associated with industrial activity that are mixed with sources of non-storm water other than non-storm water discharges that are:

   a. In compliance with a different *UPDES* permit; or

   b. Identified by and in compliance with *Part II.A.* (Prohibition of Non-storm Water Discharges) of this permit.

4. Storm water discharges associated with industrial activity that are subject to an existing *UPDES* individual or general permit.

5. Are located at a facility where a *UPDES* permit has been terminated (other than at the request of the permittee) or denied, or that are issued a permit in accordance with *Part VI.M.* (Requirements for Individual or Alternative General Permits) of this permit;

6. Storm water discharges associated with industrial activity that the *Executive Secretary* (of the *Utah Water Quality Board*) has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard. Where such determinations have been made, the discharger will be notified by the *Executive Secretary* of additional requirements for treatment or handling of the discharge or that an individual permit application is necessary. The *Executive Secretary* may authorize coverage under this permit after appropriate controls and implementation procedures, designed to bring the discharges into compliance with water quiality standards, have been included in the pollution prevention plan;

7. Discharges subject to storm water effluent guidelines, not described under *Appendix II.*

8. Storm water discharges associated with industrial activity from inactive mining, inactive landfills, or inactive oil and gas operations occurring on Federal lands where an operator cannot be identified.

PART I
Permit No.: UTR000000

E. Authorization. Dischargers of storm water associated with industrial activity must submit a complete *NOI* using an *NOI* form as found in *Appendix I* (or photocopy thereof), including payment of the appropriate permit fee to be authorized to discharge under this general permit. Unless notified by the *Executive Secretary* to the contrary, owners or operators who submit such notification are authorized immediately to discharge storm water associated with industrial activity under the terms and conditions of this permit after the NOI is received by the *DWQ*. An operator that had coverage under the preceeding expired general storm water industrial permit, must submit the *NOI* from *Appendix I* and a permit fee by January 1, 1998, to have continued coverage under this permit. The *Executive Secretary* may, at any time, deny coverage under this permit and may require submittal of an application for an individual *UPDES* permit based on a review of the *NOI* or other information.

F. *DWQ* Intent to Stagger Operator Renewal. The *DWQ* wishes to cover sectors in *Appendix II* identified in the table below for different periods of time under this permit. The table below shows the different time periods (beginning at the effective date of this permit) that the *DWQ* wishes to cover sectors in *Appendix II*. When that period of time is up, the *DWQ* will issue other permits for the specified sectors similar to this permit and with compliance issues scheduled in concert with this permit, such that permittees covered by this permit may continue under other permits with staggered renewal schedules. The objective for this action is to disperse permit renewals so that about 20% of all industrial storm water permittees will be up for renewal each year instead of 100% every 5 years. The purpose for this is simply to disperse the work load for the renewal process over 5 years rather then (how it is now) concentrating all general industrial storm water permit renewals in one year every five years.

Appendix II Sector	Years of Coverage Under This Permit
P	1
I, R, AB, and AC	2
E, G, U, AA, and AD	3
A, B, C, D, F, H, M, T, and W	4
J, K, L, N, O, Q, S, V, Y, and X	5

II. SPECIAL CONDITIONS.

A. Prohibition of Non-storm Water Discharges.

1. Storm Water Discharges. Except as provided in *Part II.A.2.* (below), all discharges covered by this permit shall be composed entirely of storm water.

2. Non-Storm Water Discharges.

a. Except as provided in *Part II.A.2.b.* (below), discharges other than storm water must be in compliance with a *UPDES* permit (other than this permit) issued for the discharge.

b. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is in compliance with *Part III* and *Appendix II*: discharges from fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; drinking fountain water; irrigation drainage; lawn watering; routine external building washdown that does not use detergents or other compounds; pavement washwaters where spills or leaks of toxic or hazardous materials (including oils and fuels) have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

B. Releases in Excess of Reportable Quantities.

1. Hazardous Substances or Oil. The discharge of hazardous substances or oil in the storm water discharge(s) from a facility shall be prevented or minimized in accordance with the applicable storm water pollution prevention plan for the facility. This permit does not relieve the permittee of the reporting requirements of *40 CFR Part 117, 40 CFR Part 110,* and *40 CFR Part 302.* Except as provided in *Part II.B.2.* (Multiple Anticipated Discharges) of this permit, where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either *40 CFR Part 117, 40 CFR 110,* or *40 CFR Part 302*, occurs during a 24-hour period:

a. The discharger is required to notify the National Response Center (NRC) (800-424-8802; in the Washington, DC metropolitan area 202-426-2675) in accordance with the requirements of *40 CFR Part 117, 40 CFR 110,* and *40 CFR Part 302* and the *Division of Water Quality* (DWQ) (801-538-6146; or the 24 hour *DWQ* answering service at 801-536-4123) as soon as he or she has knowledge of the discharge; and

b. The storm water pollution prevention plan required under *Part III.* (Storm Water Pollution Prevention Plans) of this permit must be modified within 14 calendar days

of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed by the permittee to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate; and

c. The permittee shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and steps to be taken in accordance with *Part II.B.1.b.* (above) of this permit to the *DWQ* at the address provided in *Part V.B.* (Reporting: Where to Submit) of this permit.

2. Multiple Anticipated Discharges. Facilities that have more than one anticipated discharge per year containing the same hazardous substance in an amount equal to or in excess of a reportable quantity established under either *40 CFR Part 117, 40 CFR 110,* or *40 CFR Part 302*, that occurs during a 24-hour period, where the discharge is caused by events occurring within the scope of the relevant operating system shall:

a. Submit notifications in accordance with *Part II.B.1.b.* (above) of this permit for the first such release that occurs during a calendar year (or for the first year of this permit, after submittal of an NOI); and

b. Shall provide in the storm water pollution prevention plan required under *Part III.* (Storm Water Pollution Prevention Plans) a written description of the dates on which all such releases occurred, the type and estimate of the amount of material released, and the circumstances leading to the releases. In addition, the plan must be reviewed to identify measures to prevent or minimize such releases and the plan must be modified where appropriate.

3. Spills. This permit does not authorize the discharge of hazardous substances or oil resulting from an onsite spill.

C. Co-located Industrial Activity. In the case where a facility has industrial activities occurring onsite which are described by any of the activities in other sections of *Appendix II*, those industrial activities are considered to be co-located industrial activities. Storm water discharges from co-located industrial activities are authorized by this permit, provided that the permittee complies with any and all additional pollution prevention plan and monitoring requirements from other sections of *Appendix II* applicable to the co-located industrial activity. The operator of the facility shall determine which additional pollution prevention plan and monitoring requirements are applicable to the co-located industrial activity by examining the narrative descriptions of each coverage section (Discharges Covered Under This Section) in the NOI form (*Appendix I*) of this permit.

D. Discharge Compliance with Water Quality Standards. Dischargers seeking coverage under this permit shall not be causing or have the reasonable potential to cause or contribute to a violation of a water quality standard. Where a discharge is already authorized under this permit and is later determined to cause or have the reasonable potential to cause or contribute to the violation of an applicable Water Quality Standard, the *Executive Secretary* will notify the operator of such violation(s) and the permittee shall take all necessary actions to ensure future discharges do not cause or contribute to the violation of a water quality standard and document these actions in the pollution prevention plan. If violations remain or re-occur, then coverage under this permit will be terminated by the *Executive Secretary* and an alternative permit may be issued or denied. Compliance with this requirement does not preclude any enforcement activity as provided by the *Water Quality Act* for the underlying violation.

PART III
Permit No.: UTR000000

III. STORM WATER POLLUTION PREVENTION PLANS. A storm water pollution prevention plan shall be developed for each facility covered by this permit. Storm water pollution prevention plans shall be prepared in accordance with good engineering practices and in accordance with the factors outlined in *40 CFR 125.3(d)(2)* or *(3)* as appropriate. The *DWQ* recommends that plans be signed by a State registered Professional Engineer (P.E.), particularly where plans are complex, treatment systems are used, and risks to storm water discharges are significant. The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices that are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. Facilities must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

A. Deadlines for Plan Preparation and Compliance.

1. Existing Facilities. Except as provided in *Part III.A.3.* and *4.* (below), all existing facilities and new facilities that begin operation on or before October 1, 1998 shall prepare and implement the plan by October 1, 1998.

2. New Facilities. Facilities that begin operation after October 1, 1998 shall prepare and implement the plan prior to submitting the Notice of Intent.

3. Oil and Gas Facilities. Oil and gas exploration, production, processing or treatment facilities that are not required to submit a permit application on or before January 1, 1998, in accordance with *UAC R317-8-3.8(2)(a)3.*, but after October 1, 1998, have a discharge of a reportable quantity of oil or a hazardous substance for which notification is required pursuant to either *40 CFR 110.6* or *40 CFR 302.6*, shall prepare and implement the plan on or before the date 60 calendar days after first knowledge of such release.

4. Facilities Continuing Coverage Under the Multi-Sector General Permit upon Expiration of the Baseline General Permit. Facilities previously subject to the *UPDES* General Permit for Storm Water Discharges Associated With Industrial Activity that are renewing coverage under this permit shall continue to implement the storm water pollution prevention plan required by that permit. The plan shall be revised as necessary to address requirements under *Appendix II.* of this permit no later than October 1, 1998. The revisions made to the plan shall be implemented on or before October 1, 1998.

5. Measures That Require Construction. In cases where construction is necessary to implement measures required by the plan, the plan shall contain a schedule that provides compliance with the plan as expeditiously as practicable, but no later than January 1, 2001. Where a construction compliance schedule is included in the plan, the schedule shall include appropriate non-structural and/or temporary controls to be implemented in the affected portion(s) of the facility prior to completion of the permanent control measure.

6. Extensions. Upon a showing of good cause, the *Executive Secretary* may establish a later date in writing for preparing and compliance with a plan for a storm water discharge associated with industrial activity.

B. Signature and Plan Review .

1. Signature/Location. The plan shall be signed in accordance with *Part VI.G.* (Signatory Requirements), and be retained onsite at the facility that generates the storm water discharge in accordance with *Part VI.P.2.* (Retention of Records) of this permit. For inactive facilities, the plan may be kept at the nearest office of the permittee.

2. Plan Availability. The permittee shall make plans available upon request to the *Executive Secretary*; other local agencies approving storm water management plans; interested members of the public; local government officials; or to the operators of a municipal separate storm sewer receiving discharges from the site. Viewing by the public shall be at reasonable times during regular business hours (advance notice by the public of the desire to view the plan may be required, not to exceed two working days). The permit does not require that free copies of the plan be provided to interested members of the public, only that they have access to view the document and copy it at their own expense. The copy of the plan required to be kept onsite (or locally available) must be made available to the *Executive Secretary* (or authorized representative) for review at the time of an onsite inspection.

3. Required Modifications. The *Executive Secretary*, or authorized representative, may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this part. Such notification shall identify those provisions of the permit that are not being met by the plan, and identify which provisions of the plan requires modifications in order to meet the minimum requirements of this part. Within 30 days of such notification from the *Executive Secretary*, (or as otherwise provided by the *Executive Secretary*), or authorized representative, the permittee shall make the required changes to the plan and shall submit to the *Executive Secretary* a written certification that the requested changes have been made.

C. Keeping Plans Current. The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to the waters of the State or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under *Part III.D.* (Contents of the Plan) of this permit, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. New owners shall review the existing plan and make appropriate changes: Amendments to the plan may be reviewed by the *Executive Secretary*, or an authorized representative, in the same manner as *Part III.B.* (above).

D. Contents of the Plan. The contents of the pollution prevention plan shall comply with the

requirements listed in the appropriate section of *Appendix II.* (Specific Requirements for Industrial Activities). Table 2 lists the location of the plan requirements for the respective industrial activities. These requirements are cumulative. If a facility has co-located activities that are covered in more than one section of *Appendix II.*, that facility's pollution prevention plan must comply with the requirements listed in all applicable sections of this permit.

Table 2
Pollution Prevention Plan Requirements

Storm Water Discharges From:	Are Subject to Pollution Prevention Plan Requirements Listed in Appendix:
Timber Products Facilities	II.A.3.
Paper and Allied Products Manufacturing Facilities	II.B.3.
Chemical and Allied Products Manufacturing Facilities	II.C.4.
Asphalt Paving, Roofing Materials, and Lubricant Manufacturing Facilities	II.D.3.
Glass, Clay, Cement Concrete and Gypsum Product Manufacturing Facilities	II.E.3.
Primary Metals Facilities	II.F.3.
Metal Mines (Ore Mining and Dressing)	II.G.3.
Coal Mines and Coal Mine-Related Facilities	II.H.3.
Oil or Gas Extraction Facilities	II.I.3.
Mineral Mining and Processing Facilities	II.J.3.
Hazardous Waste Treatment Storage or Disposal Facilities	II.K.3.
Landfills and Land Application Sites	II.L.3.
Automobile Salvage Yards	II.M.2.
Scrap and Waste Recycling Facilities	II.N.3.
Steam Electric Power Generating Facilities	II.O.3.
Vehicle Maintenance or Equipment Cleaning areas at Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, the United States Postal Service, or Railroad Transportation Facilities	II.P.3.

Storm Water Discharges From:	Are Subject to Pollution Prevention Plan Requirements Listed in Appendix:
Vehicle Maintenance Areas and Equipment Cleaning Areas of Water Transportation Facilities	II.Q.3.
Ship or Boat Building and Repair Yards	II.R.3.
Vehicle Maintenance Areas, Equipment Cleaning Areas or From Airport Deicing Operations located at Air Transportation Facilities	II.S.3.
Wastewater Treatment Works	II.T.3.
Food and Kindred Products Facilities	II.U.3.
Textile Mills, Apparel and other Fabric Product Manufacturing Facilities	II.V.3.
Furniture and Fixture Manufacturing Facilities	II.W.3.
Printing and Publishing Facilities	II.X.3.
Rubber and Miscellaneous Plastic Product Manufacturing Facilities	II.Y.3.
Leather Tanning and Finishing Facilities	II.Z.3.
Facilities That Manufacture Metal Products including Jewelry, Silverware and Plated Ware	II.AA.3.
Facilities That Manufacture Transportation Equipment, Industrial or Commercial Machinery	II.AB.3.
Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods	II.AC.3.
Non-Classified Facilities	II.AD.3.

E. Special Pollution Prevention Plan Requirements. In addition to the minimum standards listed in *Appendix II.* of this permit (Specific Requirements for Industrial Activities), the storm water pollution prevention plan shall include a complete discussion of measures taken to conform with the following applicable guidelines, other effective storm water pollution prevention procedures, and applicable State rules, regulations and guidelines:

1. Additional Requirements for Storm Water Discharges Associated With Industrial Activity that Discharge Into or Through Municipal Separate Storm Sewer Systems Serving a Population of 100,000 or More.

a. In addition to the applicable requirements of this permit, facilities covered by this permit are not relieved from meeting applicable requirements in municipal storm water management programs developed under *UPDES* permits issued for the discharge of the municipal separate storm sewer system that receives the facility's discharge.

b. Permittees that discharge storm water associated with industrial activity through a municipal separate storm sewer system serving a population of 100,000 or more, or a municipal system designated by the *Executive Secretary* shall make plans available to the municipal operator of the system upon request.

2. Additional Requirements for Storm Water Discharges Associated With Industrial Activity From Facilities Subject to *EPCRA Section 313* Requirements. In addition to the requirements of *Appendix II.* of this permit and other applicable conditions of this permit, storm water pollution prevention plans for facilities subject to reporting requirements under *EPCRA Section 313* for chemicals that are classified as "Section 313 water priority chemicals" in accordance with the definition in *Part VIII.* of this permit, except as provided in *Part III.E.2.c.* (below), shall describe and ensure the implementation of practices that are necessary to provide for conformance with the following guidelines:

a. In areas where Section 313 water priority chemicals are stored, processed or otherwise handled, appropriate containment, drainage control and/or diversionary structures shall be provided unless otherwise exempted under *Part III.E.2.c.* At a minimum, one of the following preventive systems or its equivalent shall be used:

(1) Curbing, culverting, gutters, sewers, or other forms of drainage control to prevent or minimize the potential for storm water runon to come into contact with significant sources of pollutants; or

(2) Roofs, covers or other forms of appropriate protection to prevent storage piles from exposure to storm water and wind.

b. In addition to the minimum standards listed under *Part III.E.2.a.* (above) of this permit, except as otherwise exempted under *Part III.E.2.c.* (below) of this permit, the storm water pollution prevention plan shall include a complete discussion of measures taken to conform with other effective storm water pollution prevention procedures, and applicable State rules, regulations, and guidelines:

(1) Liquid Storage Areas Where Storm Water Comes Into Contact With Any Equipment, Tank, Container, or Other Vessel Used for Section 313 Water Priority Chemicals.

(a) No tank or container shall be used for the storage of a Section 313 water

priority chemical unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(b) Liquid storage areas for Section 313 water priority chemicals shall be operated to minimize discharges of Section 313 chemicals. Appropriate measures to minimize discharges of Section 313 chemicals may include secondary containment provided for at least the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation, a strong spill contingency and integrity testing plan, and/or other equivalent measures.

(2) Material Storage Areas for Section 313 Water Priority Chemicals Other Than Liquids. Material storage areas for Section 313 water priority chemicals other than liquids that are subject to runoff, leaching, or wind shall incorporate drainage or other control features that will minimize the discharge of Section 313 water priority chemicals by reducing storm water contact with Section 313 water priority chemicals.

(3) Truck and Rail Car Loading and Unloading Areas for Liquid Section 313 Water Priority Chemicals. Truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals shall be operated to minimize discharges of Section 313 water priority chemicals. Protection such as overhangs or door skirts to enclose trailer ends at truck loading/unloading docks shall be provided as appropriate. Appropriate measures to minimize discharges of Section 313 chemicals may include: the placement and maintenance of drip pans (including the proper disposal of materials collected in the drip pans) where spillage may occur (such as hose connections, hose reels and filler nozzles) for use when making and breaking hose connections; a strong spill contingency and integrity testing plan; and/or other equivalent measures.

(4) Areas Where Section 313 Water Priority Chemicals Are Transferred, Processed, or Otherwise Handled. Processing equipment and materials handling equipment shall be operated so as to minimize discharges of Section 313 water priority chemicals. Materials used in piping and equipment shall be compatible with the substances handled. Drainage from process and materials handling areas shall minimize storm water contact with Section 313 water priority chemicals. Additional protection such as covers or guards to prevent exposure to wind, spraying or releases from pressure relief vents from causing a discharge of Section 313 water priority chemicals to the drainage system shall be provided as appropriate. Visual inspections or leak tests shall be provided for overhead piping conveying Section 313 water priority chemicals without secondary containment.

(5) Discharges From Areas Covered by Paragraphs *(1)*, *(2)*, *(3)*, or *(4)* (above).

(a) Drainage from areas covered by paragraphs *(1)*, *(2)*, *(3)*, or *(4)* of this part (above) should be restrained by valves or other positive means to prevent the discharge of a spill or other excessive leakage of Section 313 water priority chemicals. Where containment units are employed, such units may be emptied by pumps or ejectors; however, these shall be manually activated.

(b) Flapper-type drain valves shall not be used to drain containment areas. Valves used for the drainage of containment areas should, as far as is practical, be of manual, open-and-closed design.

(c) If facility drainage is not engineered as above, the final discharge of all in-facility storm sewers shall be equipped to be equivalent with a diversion system that could, in the event of an uncontrolled spill of Section 313 water priority chemicals, return the spilled material to the facility.

(d) Records shall be kept of the frequency and estimated volume (in gallons) of discharges from containment areas.

(6) Facility Site Runoff Other Than From Areas Covered By *(1)*, *(2)*, *(3)*, or *(4)*. Other areas of the facility (those not addressed in paragraphs *(1)*, *(2)*, *(3)*, or *(4)*), from which runoff that may contain Section 313 water priority chemicals or spills of Section 313 water priority chemicals could cause a discharge shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed material and ensure the mitigation of pollutants in runoff or leachate.

(7) Preventive Maintenance and Housekeeping. All areas of the facility shall be inspected at specific intervals identified in the plan for leaks or conditions that could lead to discharges of Section 313 water priority chemicals or direct contact of storm water with raw materials, intermediate materials, waste materials or products. In particular, facility piping, pumps, storage tanks and bins, pressure vessels, process and material handling equipment, and material bulk storage areas shall be examined for any conditions or failures that could cause a discharge. Inspection shall include examination for leaks, wind blowing, corrosion, support or foundation failure, or other forms of deterioration or noncontainment. Inspection intervals shall be specified in the plan and shall be based on design and operational experience. Different areas may require different inspection intervals. Where a leak or other condition is discovered that may result in significant releases of Section 313 water priority

chemicals to waters of the State, action to stop the leak or otherwise prevent the significant release of Section 313 water priority chemicals to waters of the State shall be immediately taken or the unit or process shut down until such action can be taken. When a leak or noncontainment of a Section 313 water priority chemical has occurred, contaminated soil, debris, or other material must be promptly removed and disposed in accordance with Federal, State, and local requirements and as described in the plan.

(8) Facility Security. Facilities shall have the necessary security systems to prevent accidental or intentional entry that could cause a discharge. Security systems described in the plan shall address fencing, lighting, vehicular traffic control, and securing of equipment and buildings.

(9) Training. Facility employees and contractor personnel that work in areas where Section 313 water priority chemicals are used or stored shall be trained in and informed of preventive measures at the facility. Employee training shall be conducted at intervals specified in the plan, but not less than once per year. Training shall address: pollution control laws and regulations, the storm water pollution prevention plan and the particular features of the facility and its operation that are designed to minimize discharges of Section 313 water priority chemicals. The plan shall designate a person who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements so that spills and emergency releases of Section 313 water priority chemicals can be isolated and contained before a discharge of a Section 313 water priority chemical can occur. Contractor or temporary personnel shall be informed of facility operation and design features in order to prevent discharges or spills from occurring.

c. Facilities subject to reporting requirements under EPCRA Section 313 for chemicals that are classified as ‹Section 313 water priority chemicals' in accordance with the definition in *Part VIII.* of this permit that are handled and stored onsite only in gaseous or non-soluble liquid or solid (at atmospheric pressure and temperature) forms may provide a certification as such in the pollution prevention plan in lieu of the additional requirements in *Part III.E.2.* Such certification shall include a narrative description of all water priority chemicals and the form in which they are handled and stored, and shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit.

d. The storm water pollution prevention plan shall be certified in accordance with *Part VI.G.* (Signatory Requirements) of this permit.

3. Additional Requirements for Salt Storage. Storage piles of salt used for deicing or other commercial or industrial purposes and that generate a storm water discharge associated with industrial activity that is discharged to waters of the State shall be enclosed or covered

to prevent exposure to precipitation, except for exposure resulting from adding or removing materials from the pile. The *Executive Secretary* may waive this requirement for salt piles located in areas where surface and/or ground waters are already high in concentrations of salt.

4. Consistency With Other Plans. Storm water pollution prevention plans may reference the existence of other plans for Spill Prevention, Control, and Countermeasure (SPCC), plans developed for the facility under Section 311 of the CWA, or *Best Management Practices* (*BMP*) Programs otherwise required by a *UPDES* permit for the facility as long as such requirement(s) is incorporated into the storm water pollution prevention plan.

5. Other Laws and Requirements.

   (1) Local Storm Water Control Requirements. This permit does not relieve the permittee from compliance with other laws affecting storm water discharges. If the requirements of this permit appears to be a conflict in with other laws or local requirements the permittee must contact the *Executive Secretary* within 30 days of knowledge of any discrepancies. Where applicable, compliance efforts to other storm water requirements (as they pertain to water quality issues) should also be reflected in the SWP3.

   (2) Threatened or Endangered Species & Historic Properties. This permit does not relieve the permittee from compliance with Federal or State laws pertaining to threatened or endangered species or historic properties. Where applicable compliance efforts to these laws should be reflected in the SWP3.

IV. NUMERIC EFFLUENT LIMITATIONS

A. Discharges Associated With Specific Industrial Activity. Numeric effluent limitations for storm water discharges associated with a specific industrial activity are described in *Appendix II.* of this permit.

B. Coal Pile Runoff. Any discharge composed of coal pile runoff shall not exceed a maximum concentration for any time of 50 mg/L total suspended solids. Coal pile runoff shall not be diluted with storm water or other flows in order to meet this limitation. The pH of such discharges shall be within the range of 6.5 to 9.0. Any untreated overflow from facilities designed, constructed and operated to treat the volume of coal pile runoff that is associated with a 10-year, 24-hour rainfall event shall not be subject to the 50 mg/L limitation for total suspended solids.

PART V
Permit No.: UTR000000

V. MONITORING AND REPORTING REQUIREMENTS

A. Monitoring Requirements.

1. Limitations on Monitoring Requirements.

a. Except as required by paragraph b. (below), only those facilities with discharges or activities identified in *Part V.C.*and *Appendix II.* are required to conduct sampling of their storm water discharges associated with industrial activity. Monitoring requirements under *Parts V.C.* and *Appendix II.* are additive. Facilities with discharges or activities described in more than one monitoring section are subject to all applicable monitoring requirements from each section.

b. The *Executive Secretary* can provide written notice to any facility otherwise exempt from the sampling requirements of *Parts V.C.* and *Appendix II.* that it shall conduct discharge sampling for a specific monitoring frequency for specific parameters.

B. Reporting: Where to Submit.

1. Location. Signed copies of storm water discharge monitoring reports (SWDMR) required under *Parts V.C.* and *Appendix II.*, individual permit applications, and all other reports required herein, shall be submitted to the *Executive Secretary* of the *Water Quality Board* at the address listed below. For each outfall, one SWDMR form must be submitted per storm event sampled.

Division of Water Quality
PO Box 144870
Salt Lake City, Utah 84114-4870

2. Additional Notification. In addition to filing copies of discharge monitoring reports in accordance with *Part V.B.1* (above), facilities with at least one storm water discharge associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) or a municipal system designated by the *Executive Secretary* must submit signed copies of discharge monitoring reports to the operator of the municipal separate storm sewer system in accordance with the dates provided in *Appendix II.* Facilities not required to report monitoring data under *Appendix II.* and facilities that are not otherwise required to monitor their discharges, have no need to comply with this provision.

C. Special Monitoring Requirements for Coal Pile Runoff. During the period beginning on the effective date and lasting through the expiration date of this permit, permittees with storm water discharges containing coal pile runoff shall monitor such storm water for: pH and TSS (mg/l) at least annually (1 time per year). Permittees with discharges containing coal pile runoff must report in accordance with *Part IV.B.* (Coal Pile Runoff) and *Part V.B.* (Reporting: Where to

Submit). In addition to the parameters listed above, the permittee shall provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event samples and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge samples.

1. Sample Type. Discharges containing coal pile runoff shall be monitored by a grab sample(s). All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

2. Sampling Waiver. When a discharger is unable to collect samples of coal pile runoff due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next period and submit this data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

3. Representative Discharge. When a facility has two or more outfalls containing coal pile runoff that, based on a consideration of the other industrial activity, and significant materials, and upon management practices and activities within the area drained by the outfall, and the permittee reasonably believes substantially identical effluents are discharged, the permittee may test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfalls provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area (e.g., low (under 40 percent), medium (40 to 65 percent) or high (above 65 percent)) shall be provided in the plan. Permittees required to submit monitoring information under *Part VI.* of this permit shall include the description of the location of the outfalls, explanation of why outfalls are expected to discharge substantially identical effluents, and estimate of the size of the drainage area and runoff coefficient with the SWDMR. This representative discharge provision is not applicable to storm water

discharges from coal piles regulated under the national effluent limitations guidelines.

4. Alternative Certification. Facilities with storm water discharges containing coal pile runoff may not submit alternative certification in lieu of the required monitoring data.

5. When to Submit. Permittees with discharges containing coal pile runoff shall submit monitoring results annually no later than the 28th day of January.

VI. STANDARD PERMIT CONDITIONS

A. Duty to Comply.

1. Permittee's Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the *Act* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions.

   a. Negligent Violations. The *Act* provides that any person who negligently violates permit conditions implementing the *Act*, this permit, or the Utah wastewater rules is subject to a fine of $10,000 per day.

   b. Willful or Gross Negligence. The *Act* provides that any person who willfully or with gross negligence violates *UCA 19-5-107(1)* (discharges a pollutant to waters of the State) or a condition or limitation of this permit is subject to a fine of $25,000 per day or $50,000 per day for any person twice convicted.

   c. False Statements. The *Act* provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the *Act* or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the *Act* shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment by 6 months, or by both.

B. Continuation of the Expired General Permit. This permit, expires on December 31, 2002. However, an expired general permit may continue in force and effect after the expiration date until a new permit is issued if a timely reapplication is made for the new permit (*UAC R317-8-3.1(1)(d)*). If this permit is not renewed by the *Division of Water Quality*, for some reason, the *Executive Secretary* will notify the permittee and provide instructions concerning how to stay in compliance with the the *Utah Water Quality Act* and the *Utah Wastewater Rules* (*UAC R317-8*) with the discharge(s) that is(are) covered by this permit.

C. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to Provide Information. The permittee shall furnish to the *Executive Secretary* or an

authorized representative any information which is requested to determine compliance with this permit or other information. The permittee shall also furnish copies of records required to be kept by this permit to the *Executive Secretary* upon request.

F. Other Information. When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the *NOI* or in any other report to the *Executive Secretary*, he or she shall promptly submit such facts or information.

G. Signatory Requirements. All *Notices of Intent*, storm water pollution prevention plans, reports, certifications or information either submitted to the *Executive Secretary* or the operator of a large or medium municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed as follows:

1. All Notices of Intent shall be signed as follows:

   a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   b. For a partnership of sole proprietorship: by a general partner or the proprietor, respectively; or

   c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

      (1) the chief executive officer of the agency, or

      (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

2. All reports required by the permit and other information requested by the *Executive Secretary* or by an authorized representative of the *Executive Secretary* shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to

the *Executive Secretary*.

b. The authorization specifies either an individual or a position having responsibility for overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

c. Changes to authorization. If an authorization under *Part VI.G.2.* is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new notice of intent satisfying the requirements of *Part I.C. & D.* must be submitted to the *Executive Secretary* prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing documents under *Part VI.G.* shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Penalties for Falsification of Reports. The *"Act"* provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months, or by both.

I. Penalties for Falsification of Monitoring Systems. The *"Act"* provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by fines and imprisonment described in *19-5-111* of the *"Act"*.

J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the "*Act*".

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of

personal rights, nor any infringement of Federal, State, or local laws or regulations.

L. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

M. Requiring an Individual Permit or an Alternative General Permit.

1. *Executive Secretary* Designation. The *Executive Secretary* may require any person authorized by this permit to apply for and/or obtain either an individual *UPDES* permit or an alternative *UPDES* general permit. Any interested person may petition the *Executive Secretary* to take action under this paragraph. The *Executive Secretary* may require any owner or operator authorized to discharge under this permit to apply for an individual *UPDES* permit only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the owner or operator to file the application, and a statement that on the effective date of issuance or denial of the individual *UPDES* permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Individual permit applications shall be submitted to the address of the *DWQ* shown in *Part V.B.* (Reporting: Where to Submit) of this permit. The *Executive Secretary* may grant additional time to submit the application upon request of the applicant. If an owner or operator fails to submit, in a timely manner, an individual *UPDES* permit application as required by the *Executive Secretary*, then the applicability of this permit to the individual *UPDES* permittee is automatically terminated at the end of the day specified for application submittal.

2. Individual Permit Application. Any owner or operator authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application (EPA, Form 1 and Form 2F) with reasons supporting the request to the *Executive Secretary*. Individual permit applications shall be submitted to the address of the DWQ shown in *Part V.B.* of this permit. The request may be granted by the issuance of any individual permit or an alternative general permit if the reasons cited by the owner or operator are adequate to support the request.

3. Individual/Alternative General Permit Issuance. When an individual *UPDES* permit is issued to an owner or operator otherwise subject to this permit, or the owner or operator is authorized for coverage under an alternative *UPDES* general permit, the applicability of this permit to the individual *UPDES* permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual *UPDES* permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied

for coverage under an alternative *UPDES* general permit, the applicability of this permit to the individual *UPDES* permittee is automatically terminated on the date of such denial, unless otherwise specified by the *Executive Secretary*.

N. State/Environmental Laws.

1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by *UCA 19-5-117.*

2. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

O. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

P. Monitoring and Records.

1. Representative Samples/Measurements. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. Retention of Records.

   a. The permittee shall retain records of all monitoring information, copies of all reports required by this permit, and records of all data used to complete the application of this permit for a period of at least three (3) years from the date of sample, measurement, evaluation or inspection, report, or application. This period may be extended by request of the *Executive Secretary* at any time. Permittees must submit any such records to the *Executive Secretary* upon request.

   b. The permittee shall retain the pollution prevention plan developed in accordance with *Part III.* and *Appendix II.* of this permit until a date 3 years after the last modification or amendment is made to the plan, and at least 1 year after coverage under this permit terminates.

3. Records Contents. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;

b. The initials or name(s) of the individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The time(s) analyses were initiated;

e. The initials or name(s) of the individual(s) who performed the analyses;

f. References and written procedures, when available, for the analytical techniques or methods used; and

g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

4. Approved Monitoring Methods. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

Q. Inspection and Entry. The permittee shall allow the *Executive Secretary* or an authorized representative, the EPA, or in the case of a facility that discharges through a municipal separate storm sewer, an authorized representative of the municipal operator or the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to: enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit; have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

R. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

S. Bypass of Treatment Facility.

1. Notice.

a. Anticipated Bypass. If a permittee subject to the numeric effluent limitations of *Parts IV.* and *Appendix II.* of this permit knows in advance of the need for a bypass, he or she shall submit prior notice, if possible, at least 10 days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.

b. Unanticipated Bypass. The permittee subject to the numeric effluent limitations of *Parts IV.* and *Appendix II.* of this permit shall submit notice of an unanticipated bypass. Any information regarding the unanticipated bypass shall be provided orally within 24 hours from the time the permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee became aware of the circumstances. The written submission shall contain a description of the bypass and its cause; the period of the bypass; including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

2. Prohibition of Bypass.

a. Bypass is prohibited and the *Executive Secretary* may take enforcement action against a permittee for a bypass. Unless:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee should, in the exercise of reasonable engineering judgement, have installed adequate backup equipment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices of the bypass.

b. The *Executive Secretary* may approve an anticipated bypass after considering its adverse effects, if the *Executive Secretary* determines that it will meet the three conditions listed in *Part VI.S.2.a.*

T. Upset Conditions.

1. Affirmative Defense. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based numeric effluent limitations in *Parts IV.* and *Appendix II.* of this permit if the requirements of paragraph 2 below are met. The *Executive Secretary's* administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.

2. Required Defense. A permittee who wishes to establish the affirmative defense of an upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

a. An upset occurred and that the permittee can identify the specific cause(s) of the upset:

b. The permitted facility was at the time being properly operated; and

c. The permittee provided oral notice of the upset to the *Executive Secretary* within 24 hours from the time the permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee became aware of the circumstances. The written submission shall contain a description of the upset and its cause; the period of the upset; including exact dates and times, and if the upset has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the upset.

3. Burden of Proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

VII. REOPENER CLAUSE

A. Potential or Realized Impacts on Water Quality. If there is evidence indicating potential or realized impacts on water quality or on a listed endangered species due to any storm water discharge associated with industrial activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or an alternative general permit in accordance with *Part VI.M.* (Requiring an Individual Permit or an Alternative General Permit) of this permit or the permit may be modified to include different limitations and/or requirements.

B. Applicable Regulations. Permit modification or revocation will be conducted according to *UAC R317-8-5.6* and *UAC R317-8-6.2.*

PART VIII
Permit No.: UTR000000

VIII. DEFINITIONS

A. Definitions Pertaining to this Permit.

1. "Act" means the "*Utah Water Quality Act*".

2. "*Best Management Practices*" ("*BMPs*") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

3. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

4. "Coal pile runoff" means the rainfall runoff from or through any coal storage pile.

5. "Co-located industrial activity" means when a facility has industrial activities being conducted onsite that are described under more than one of the coverage sections of *Appendix II* in this permit (Discharges Covered Under This Permit). Facilities with co-located industrial activities shall comply with all applicable monitoring and pollution prevention plan requirements of each section in which a co-located industrial activity is described.

6. "*CWA*" means "*Clean Water Act*" (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972).

7. "Commercial Treatment and Disposal Facilities" means facilities that receive, on a commercial basis, any produced hazardous waste (not their own) and treat or dispose of those wastes as a service to the generators. Such facilities treating and/or disposing exclusively residential hazardous wastes are not included in this definition.

8. "*DWQ*" means the "*Division of Water Quality*", the State agency authorized by the EPA to administer the *National Pollutant Discharge Elimination System* (*NPDES*) permitting program, described in the *CWA Section 402*, within the State of Utah (except for Indian lands). Since jurisdiction is limited to the State of Utah the program administered by the *DWQ* is called the *Utah Pollutant Discharge Elimination System* (*UPDES*).

9. "*Executive Secretary*" means the *Executive Secretary* of the *Water Quality Board.*

10. "Flow-weighted composite sample" means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

11. "Landfill" means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile.

12. "Land application unit" means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

13. "Municipal separate storm sewer system" (large and/or medium) means all municipal separate storm sewers that are either:

    a. located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (at the issuance date of this permit, Salt Lake City is the only city in Utah that falls in this category); or

    b. located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (at the issuance date of this permit Salt Lake County is the only county that falls in this category); or

    c. owned or operated by a municipality other than those described in paragraph *a.* or *b.* (above) and that are designated by the *Executive Secretary* as part of the large or medium municipal separate storm sewer system.

14. "*NOI*" means "*notice of intent*", it is an application form that is used to obtain coverage under this permit (see *Appendix I.*).

15. "*NOT*" means "*notice of termination*", it is a form used to terminate coverage under this permit (see *Appendix I* of this permit.).

16. "Point source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

17. "Section 313 water priority chemical" means a chemical or chemical categories that:

    a. are listed at *40 CFR 372.65* pursuant to *Section 313* of the *Emergency Planning and Community Right-to-Know Act* (*EPCRA*) (also known as *Title III of the Superfund Amendments and Reauthorization Act* (*SARA*) of 1986);

    b. are present at or above threshold levels at a facility subject to *EPCRA Section 313* reporting requirements; and

c. meet at least one of the following criteria:

(1) are listed in *Appendix D* of *40 CFR Part 122* on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances);

(2) are listed as a hazardous substance pursuant to *Section 311(b)(2)(A)* of the *CWA* at *40 CFR 116.4*; or

(3) are pollutants for which EPA has published acute or chronic water quality criteria. See *Appendix III* of this permit. This appendix was revised based on final rulemaking EPA published in the *Federal Register* November 30, 1994.

18. "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under *Section 101(14)* of *CERCLA*; any chemical the facility is required to report pursuant to *EPCRA Section 313*; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

19. "Significant spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under *Section 311 of the Clean Water Act* (see *40 CFR 110.10* and *CFR 117.21*) or *Section 102* of *CERCLA* (see *40 CFR 302.4*).

20. "Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

21. "SWDMR" means "*storm water discharge monitoring report*", a report of the results of storm water monitoring required by the permit. A storm water discharge monitoring report form is provided by the Division of Water Quality.

22. "Storm water associated with industrial activity" (*UAC R317-8-3.8(6)(c) & (d)*) means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the *UPDES* program. For the categories of industries identified in paragraphs *(a)* through *(j)* of this definition, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined in *40 CFR Part 401*); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage,

or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in paragraph *(k)* of this definition, the term includes only storm water discharges from all areas (except access roads and rail lines) listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs *(a)* to *(k)* of this definition) include those facilities designated under *UAC R317-8-3.8(1)(a)5.* The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

a. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under *40 CFR Subchapter N* (except facilities with toxic pollutant effluent standards that are exempted under category (k) of this definition);

b. Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373;

c. Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under *40 CFR 434.11(l)* because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of noncoal mining operations that have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; inactive mining operations are mining sites that are not being actively mined, but that have an identifiable owner/operator;

d. Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

e. Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under *Subtitle D* of *RCRA*;

f. Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

g. Steam electric power generating facilities, including coal handling sites;

h. Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45 and 5171 that have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or that are otherwise identified under paragraphs (a) to (g) or (I) to (k) of this subsection are associated with industrial activity;

i. Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under *40 CFR Part 403*. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and that are not physically located in the confines of the facility, or areas that are in compliance with *40 CFR Part 503*;

j. Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than 5 acres of total land area that are not part of a larger common plan of development or sale;

k. Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and that are not otherwise included within categories (a) to (j))[3].

23. "Time-weighted composite" means a composite sample consisting of a mixture of equal

[3]On June 4, 1992, the United States Court of Appeals for the Ninth Circuit remanded the exclusion for manufacturing facilities in category (xi) that do not have materials or activities exposed to storm water to the EPA for further rulemaking. (Nos. 90-70671 and 91-70200.)

volume aliquots collected at a constant time interval.

24. "UAC" means "Utah Administrative Code" the administrative rules for the State of Utah.

25. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with the numeric effluent limitations of *Parts IV.* and *Appendix II.* of this permit because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

26. "Waste pile" means any noncontainerized accumulation of solid, nonflowing waste that is used for treatment or storage.

27. "Waters of the State" (*UAC R317-1-1.32*) means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion thereof, except that bodies of water confined to and retained within the limits of private property, and which do not develop into or constitute a nuisance, or a public health hazard, or a menace to fish and wildlife, shall not be considered to be "waters of the state".

APPENDIX II

POLLUTION PREVENTION PLAN REQUIREMENTS FOR INDUSTRIAL SECTORS (LISTED A THROUGH AD)

APPENDIX III

SECTION 313 WATER PRIORITY CHEMICALS

APPROVED

DIV. OIL GAS & MINING

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
75-07-0	Acetaldehyde
75865	Acetane cynohydrin
107-02-8	Acrolein
107-13-1	Acrylonitrile
309-00-2	Aldrin[1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1.alpha.,4.alpha.,4a.beta.,5.alpha.,8.alpha.,8a.beta.)-]
107-05-1	Allyl Chloride
7429-90-5	Aluminum (fume or dust)
7664-41-7	Ammonia
62-53-3	Aniline
120-12-7	Anthracene
7440-36-0	Antimony
7647189	Antimony pentachloride
28300745	Antimony potassium tartrate
7789619	Antimony tribromide
10025919	Antimony trichloride
7783564	Antimony trifluoride
1309644	Antimony trioxide
7440-38-2	Arsenic
1303328	Arsenic disulfide
1303282	Arsenic pentoxide
7784341	Arsenic trichloride
1327533	Arsenic trioxide
1303339	Arsenic trisulfide
1332-21-4	Asbestos (friable)

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
542621	Barium cyanide
71-43-2	Benzene
92-87-5	Benzidine
100470	Benzonitrile
98-88-4	Benzoyl chloride
100-44-7	Benzyl chloride
7440-41-7	Beryllium
7787475	Beryllium chloride
7787497	Beryllium fluoride
7787555	Beryllium nitrate
111-44-4	Bis(2-chloroethyl) ether
75-25-2	Bromoform
74-83-9	Bromomethane (Methyl bromide)
85-68-7	Butyl benzyl phthalate
7440-43-9	Cadmium
543908	Cadmium acetate
7789426	Cadmium bromide
10108642	Cadmium chloride
7778441	Calcium arsenate
52740166	Calcium arsenite
13765190	Calcium chromate
592018	Calcium cyanide
133-06-2	Captan [1H-Isoindole-1,3(2H)-dione,3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-]
63-25-2	Carbaryl [1-Naphthalenol, methylcarbamate]
75-15-0	Carbon disulfide

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
56-23-5	Carbon tetrachloride
57-74-9	Chlordane [4,7-Methanoindan,1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-]
7782-50-5	Chlorine
59-50-7	Chloro-4-methyl-3-phenol *p*-Chloro-*m*-cresol
108-90-7	Chlorobenzene
75-00-3	Chloroethane (Ethyl chloride)
67-66-3	Chloroform
74-87-3	Chloromethane (Methyl chloride)
95-57-8	2-Chlorophenol
106-48-9	4-Chlorophenol
1066304	Chromic acetate
11115745	Chromic acid
10101538	Chromic sulfate
7440-47-3	Chromium
1308-14-1	Chromium (Tri)
10049055	Chromous chloride
7789437	Cobaltous bromide
544183	Cobaltous formate
14017415	Cobaltous sulfamate
7440-50-8	Copper
108-39-4	*m*-Cresol
9548-7	*o*-Cresol
106-44-5	*p*-Cresol
1319-77-3	Cresol (mixed isomers)
142712	Cupric acetate

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
12002038	Cupric acetoarsenite
7447394	Cupric chloride
3251238	Cupric nitrate
5893663	Cupric oxalate
7758987	Cupric sulfate
10380297	Cupric sulfate, ammoniated
815827	Cupric tartrate
57-12-5	Cyanide
506774	Cyanogen chloride
110-82-7	Cyclohexane
94-75-7	2,4-D [Acetic acid, (2,4-dichlorophenoxy)-]
106-93-4	1,2-Dibromoethane (Ethylene dibromide)
84-74-2	Dibutyl phthalate
25321-22-6	Dichlorobenzene (mixed isomers)
95-50-1	1,2-Dichlorobenzene
541-73-1	1,3-Dichlorobenzene
106-46-7	1,4-Dichlorobenzene
91-94-1	3,3'-Dichlorobenzidine
75-27-4	Dichlorobromomethane
107-06-2	1,2-Dichloroethane (Ethylene dichloride)
540-59-0	1,2-Dichloroethylene
120-83-2	2,4-Dichlorophenol
78-87-5	1,2-Dichloropropane
542-75-6	1,3-Dichloropropylene
62-73-7	Dichlorvos [Phosphoric acid, 2,2-dichloroethenyl dimethyl ester]

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
115-32-2	Dicofol [Benzenemethanol, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-(trichloromethyl)-]
177-81-7	Di-(2-ethylhexyl phthalate (DEHP)
84-66-2	Diethyl phthalate
105-67-9	2,4-Dimethylphenol
131-11-3	Dimethyl phthalate
534-52-1	4,6-Dinitro-*o*-cresol
51-28-5	2,4-Dinitrophenol
121-14-2	2,4-Dinitrotoluene
606-20-2	2,6-Dinitrotoluene
117-84-0	*n*-Dioctyl phthalate
122-66-7	1,2-Diphenylhydrazine (Hydrazobenzene)
106-89-8	Epichlorohydrin
100-41-4	Ethylbenzene
106934	Ethylene dibromide
50-00-0	Formaldehyde
76-44-8	Heptachlor [1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene]
118-74-1	Hexachlorobenzene
87-68-3	Hexachloro-1,3-butadiene
77-47-4	Hexachlorocyclopentadiene
67-72-1	Hexachloroethane
7647-01-0	Hydrochloric acid
74-90-8	Hydrogen cyanide
7664-39-3	Hydrogen fluoride
7439-92-1	Lead

SECTION 313 WATER PRIORITY CHEMICALS	
	Common Name
301042	Lead acetate
7784409	Lead arsenate
7645252	Lead arsenate
10102484	" "
7758954	Lead chloride
13814965	Lead fluoborate
7783462	Lead fluoride
10101630	Lead iodide
10099748	Lead nitrate
7428480	Lead stearate
1072351	" "
52652592	" "
7446142	Lead sulfate
1314870	Lead sulfide
592870	Lead thiocyanate
58-89-9	Lindane [Cyclohexane, 1,2,3,4,5,6-hexachloro- (1.alpha.,3.beta., 4.alpha.,5.alpha.,6.beta.)-]
14307358	Lithium chromate
108-31-6	Maleic anhydride
592041	Mercuric cyanide
10045940	Mercuric nitrate
7783359	Mercuric sulfate
592858	Mercuric thiocyanate
7782867	Mercurous nitrate
7439-97-6	Mercury
72-43-5	Methoxychlor [Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- methoxy-]

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	
80-62-6	Methyl methacrylate
91-20-3	Naphthalene
7440-02-0	Nickel
15699180	Nickel ammonium sulfate
37211055	Nickel chloride
7718549	" "
12054487	Nickel hydroxide
14216752	Nickel nitrate
7786814	Nickel sulfate
7697-37-2	Nitric acid
98-95-3	Nitrobenzene
88-75-5	2-Nitrophenol
100-02-7	4-Nitrophenol
62-75-9	*N*-Nitrosodimethylamine
86-30-6	*N*-Nitrosodiphenylamine
621-64-7	*N*-Nitrosodi-*n*-propylamine
56-38-2	Parathion [Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester]
87-86-5	Pentachlorophenol (PCP)
108-95-2	Phenol
75-44-5	Phosgene
7664-38-2	Phosphoric acid
7723-14-0	Phosphorus (yellow or white)
1336-36-3	Polychlorinated biphenyls (PCBs)
7784410	Potassium arsenate
10124502	Potassium arsenite
7778509	Potassium bichromate

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	**Common Name**
7789006	Potassium chromate
151508	Potassium cyanide
75-56-9	Propylene oxide
91-22-5	Quinoline
7782-49-2	Selenium
7446084	Selenium oxide
7440-22-4	Silver
7761888	Silver nitrate
7631892	Sodium arsenate
7784465	Sodium arsenite
10588019	Sodium bichromate
7775113	Sodium chromate
143339	Sodium cyanide
10102188	Sodium selenite
7782823	" "
7789062	Strontium chromate
100-42-5	Styrene
7664-93-9	Sulfuric acid
79-34-5	1,1,2,2-Tetrachloroethane
127-18-4	Tetrachloroethylene (Perchloroethylene)
935-95-5	2,3,5,6-Tetrachlorophenol
78002	Tetraethyl lead
7440-28-0	Thallium
10031591	Thallium sulfate
108-88-3	Toluene
8001-35-2	Toxaphene

SECTION 313 WATER PRIORITY CHEMICALS	
	Common Name
52-68-6	Trichlorfon [Phosphonic acid, (2,2,2-trichloro-1-hydroxyethyl)-dimethylester]
120-82-1	1,2,4-Trichlorobenzene
71-55-6	1,1,1-Trichloroethane (Methyl chloroform)
79-00-5	1,1,2-Trichloroethane
79-01-6	Trichloroethylene
95-95-4	2,4,5-Trichlorophenol
88-06-2	2,4,6-Trichlorophenol
7440-62-2	Vanadium (fume or dust)
108-05-4	Vinyl acetate
75-01-4	Vinyl chloride
75-35-4	Vinylidene chloride
108-38-3	*m*-Xylene
95-47-6	*o*-Xylene
106-42-3	*p*-Xylene
1330-20-7	Xylene (mixed isomers)
7440-66-6	Zinc (fume or dust)
557346	Zinc acetate
14639975	Zinc ammonium chloride
14639986	" " "
52628258	" " "
1332076	Zinc borate
7699458	Zinc bromide
3486359	Zinc carbonate
7646857	Zinc chloride
557211	Zinc cyanide
7783495	Zinc fluoride

SECTION 313 WATER PRIORITY CHEMICALS	
CAS Number	
557415	Zinc formate
7779864	Zinc hydrosulfite
7779886	Zinc nitrate
127822	Zinc phenolsulfonate
1314847	Zinc phosphide
16871719	Zinc silicofluoride
7733020	Zinc sulfate

APPENDIX E

UPDES Appendix II.J

UPDES General Multi-Sector Industrial Storm Water Permit Appendix II.J. Storm Water Discharges Associated With Industrial Activity From Mineral Mining and Processing Facilities.

J. Storm Water Discharges Associated With Industrial Activity From Mineral Mining and Processing Facilities.

1. Coverages of This Section.

   a. Discharges Covered Under This Section. This permit covers discharges of storm water associated with industrial activity to waters of the State from active and inactive mineral mining and processing facilities (generally identified by Standard Industrial Classification (SIC) Major Group 14), except for storm water discharges identified under paragraph *1.b.*

   b. Limitations on Coverage. The following storm water discharges associated with industrial activity are not authorized by this permit:

      1) Storm water discharges associated with industrial activity which are subject to an existing effluent limitation guideline (*40 CFR Part 436*),

      2) Storm water discharges associated with industrial activity from inactive mineral mining activities occurring on Federal lands where an operator cannot be identified are not eligible for coverage under this permit.

   c. Co-Located Construction Activity. This permit may authorize storm water discharges associated with industrial activity that are mixed with storm water discharges associated with construction activities, provided that the storm water discharge from the construction activity is in compliance with the terms, including applicable *Notice of Intent* (*NOI*) or application requirements, of the *UPDES* general storm water permit for construction activity (Permit No.: *UTR100000*).

   d. Co-Located Industrial Activity. When an industrial facility, described by the above coverage provisions of this section, has industrial activities being conducted onsite that meet the description(s) of industrial activities in another section(s), that industrial facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of this multi-sector permit are additive for industrial activities being conducted at the same industrial facility. The operator of the facility shall determine which other monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

2. Special Conditions.

   a. Prohibition of Non-storm Water Discharges. This section of this permit does not cover any discharge subject to process wastewater effluent limitation guidelines, including storm water that combines with process wastewater. *Part II.A.2.* of this permit does allow certain non-storm water discharges to be covered by this permit.

3. Storm Water Pollution Prevention Plan Requirements.

   a. Contents of Plan. The plan shall include at a minimum, the following items:

      1) Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution

Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

2) Description of Potential Pollutant Sources. Each storm water pollution prevention plan must describe industrial activities, significant materials, and physical features of the facility that may contribute to storm water runoff or, during periods of dry weather, result in dry weather flows and mine pumpout. Plans must describe the following elements:

a) Drainage. The plan must contain a map of the site that shows the pattern of storm water drainage, structural or nonstructural features that control pollutants in storm water runoff and process wastewater discharges, surface water bodies (including wetlands), places where significant materials are exposed to rainfall and runoff, and locations of major spills and leaks that occurred in the 3 years prior to the date of the submission of a *Notice of Intent* (*NOI*) to be covered under this permit. The map also must show areas where the following activities take place: fueling, vehicle and equipment maintenance and/or cleaning, loading and unloading, material storage (including tanks or other vessels used for liquid or waste storage), material processing, and waste disposal, haul roads, access roads, and rail spurs. In addition, the map must indicate the outfall locations and the types of discharges contained in the drainage areas of the outfalls.

b) Inventory of Exposed Materials. Facility operators are required to carefully conduct an inspection of the site and related records to identify significant materials that are or may be exposed to storm water. The inventory must address materials that within 3 years prior to the date of the submission of a *Notice of Intent* (*NOI*) to be covered under this permit have been handled, stored, processed, treated, or disposed of in a manner to allow exposure to storm water. Findings of the inventory must be documented in detail in the pollution prevention plan. At a minimum, the plan must describe the method and location of onsite storage or disposal; practices used to minimize contact of materials with rainfall and runoff; existing structural and nonstructural controls that reduce pollutants in storm water runoff; existing structural controls that limit process wastewater discharges; and any treatment the runoff receives before it is discharged to surface waters or a separate storm sewer system. The description must be updated whenever there is a significant change in the types or amounts of materials, or material management practices, that may affect the exposure of materials to storm water.

c) Significant Spills and Leaks. The plan must include a list of any significant spills and leaks of toxic or hazardous pollutants that occurred in the 3 years prior to the date of the submission of a *Notice of Intent* (*NOI*) to be covered under this permit. Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under *Section 311 of CWA* (see *40 CFR 110.10* and *117.21*) or *Section 102* of the *Comprehensive Environmental Response, Compensation and Liability Act* (*CERCLA*) (see *40 CFR 302.4*). Significant spills may also include releases of

oil or hazardous substances that are not in excess of reporting requirements and releases of materials that are not classified as oil or a hazardous substance.

d) Sampling Data. Any existing data on the quality or quantity of storm water discharges from the facility must be described in the plan. The description should include a discussion of the methods used to collect and analyze the data. Sample collection points should be identified in the plan and shown on the site map.

e) Risk Identification and Summary of Potential Pollutant Sources. The description of potential pollution sources culminates in a narrative assessment of the risk potential that sources of pollution pose to storm water quality. This assessment should clearly point to activities, materials, and physical features of the facility that have a reasonable potential to contribute significant amounts of pollutants to storm water. Any such industrial activities, significant materials, or features must be addressed by the measures and controls subsequently described in the plan. In conducting the assessment, the facility operator must consider the following activities: loading and unloading operations; outdoor storage activities; outdoor processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The assessment must list any significant pollution sources at the site and identify the pollutant parameter or parameters (i.e., total suspended solids, total dissolved solids, etc.) associated with each source.

3) Measures and Controls. Following completion of the source identification and assessment phase, the permittee must evaluate, select, and describe the pollution prevention measures, *best management practices* (*BMP*s), and other controls that will be implemented at the facility. The permittee must assess the applicability of the following *BMP*s for their site: discharge diversions, drainage/storm water conveyance systems, runoff dispersions, sediment control and collection mechanisms, vegetation/soil stabilization, and capping of contaminated sources. In addition, *BMP*s include processes, procedures, schedules of activities, prohibitions on practices, and other management practices that prevent or reduce the discharge of pollutants in storm water runoff.

a) The pollution prevention plan must discuss the reasons each selected control or practice is appropriate for the facility and how each will address the potential sources of storm water pollution. The plan also must include a schedule specifying the time or times during which each control or practice will be implemented. In addition, the plan should discuss ways in which the controls and practices relate to one another and, when taken as a whole, produce an integrated and consistent approach for preventing or controlling potential storm water contamination problems.

b) Good Housekeeping. Good housekeeping requires the maintenance of areas which may contribute pollutants to storm waters discharges in a clean, orderly manner.

c) Preventive Maintenance. The maintenance program requires periodic removal of debris from discharge diversions and conveyance systems. These activities

should be conducted in the spring, after snowmelt, and during the fall season. Permittees using ponds to control their effluents frequently use impoundments or sedimentation ponds as their BAT/BCT. Maintenance schedules for these ponds must be provided in the pollution prevention plan.

d) Spill Prevention and Response Procedures. Areas where potential spills which can contribute pollutants to storm water discharges can occur, and their accompanying drainage points shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

e) Inspections.

(1) Facilities, Areas and Frequency. Operators of active facilities are required to conduct quarterly visual inspections of all *BMP*s. Temporarily and permanently inactive operations are required to perform annual inspections. The inspections shall include:

(a) an assessment of the integrity of storm water discharge diversions, conveyance systems, sediment control and collection systems, and containment structures;

(b) visual inspections of vegetative *BMP*s, serrated slopes, and benched slopes to determine if soil erosion has occurred; and

(c) visual inspections of material handling and storage areas and other potential sources of pollution for evidence of actual or potential pollutant discharges of contaminated storm water.

(2) Inspection Period and Conditions. The inspection must be made at least once in each designated period during daylight hours unless there is insufficient rainfall or snow-melt to produce a runoff event. Inspections shall be conducted in each of the following periods for the purposes of inspecting storm water quality associated with storm water runoff and snow melt: January through March (storm water runoff or snow melt); April through June(storm water runoff); July through September (storm water runoff); October through December (storm water runoff or snow melt).

f) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.

g) Recordkeeping and Internal Reporting Procedures. A description of incidents such as spills or other discharges along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. The permittee must describe procedures for developing and retaining records on the status and effectiveness of plan implementation. The plan must address spills, monitoring, and *BMP* inspection and maintenance activities. Ineffective *BMP*s must be recorded and the date of their corrective action noted.

h) Non-storm Water Discharges.

(1) Certification. The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with *Part VI.G.* of this permit. Such certification may not be feasible if the facility operating the storm water discharge associated with industrial activity does not have access to an outfall, manhole, or other point of access to the ultimate conduit which receives the discharge. In such cases, the source identification section of the storm water pollution prevention plan shall indicate why the certification required by this part was not feasible, along with the identification of potential significant sources of non-storm water at the site. A discharger that is unable to provide the certification required by this paragraph must notify the *Executive Secretary* in accordance with paragraph *3.a.(g)(iii)* (Failure to Certify) of this section.

(2) Exceptions. Except for flows from fire fighting activities, sources of non-storm water listed in *Part II.A.2.* (Prohibition of Non-storm Water Discharges) of this permit that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

(3) Failure to Certify. Any facility that is unable to provide the certification required (testing for non-storm water discharges), must notify the *Executive Secretary* within 180 days after submitting a notice of intent to be covered by this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges to the storm sewer; and why adequate tests for such storm sewers were not feasible. Non-storm water discharges to waters of the State which are not authorized by a *UPDES* permit are unlawful and must be terminated.

i) Sediment and Erosion Control. The plan shall identify areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

(1) Permittees must indicate the location and design for proposed *BMP*s to be implemented prior to land disturbance activities. For sites already disturbed but without *BMP*s, the permittee must indicate the location and design of *BMP*s that will be implemented. The permittee is required to indicate plans for grading, contouring, stabilization, and establishment of vegetative cover for all disturbed areas, including road banks. Reclamation activities must continue until final closure notice has been issued.

j) Management of Runoff. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those which control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide that measures that the permittee determines to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity [see paragraph *3.a.(2)* (Description of Potential Pollutant Sources) of this section] shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, wet detention/retention devices, or equivalent measures. In addition, the permittee must describe the storm water pollutant source area or activity (i.e., loading and unloading operations, raw material storage piles, etc.) to be controlled by each storm water management practice.

4) Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the plan, but, in no case less than once a year. When annual compliance evaluations are shown in the plan to be impractical for inactive mining sites, due to remote location and inaccessibility, site evaluations must be conducted at least once every 3 years. Such evaluations shall provide:

a) Areas contributing to a storm water discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with paragraph *3.a.(2)* (Description of Potential Pollutant Sources) of this section and pollution prevention measures and controls identified in the plan in accordance with paragraph *3.a.(3)* (Measures and Controls) of this section shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the evaluation.

c) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph *3.a.(4)(b)* (above) of the section shall be made and retained as part of the storm water pollution prevention plan for at least 3 years from the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit.

d) The storm water pollution prevention plan must describe the scope and content of comprehensive site evaluation that qualified personnel will conduct to; 1) confirm the accuracy of the description of potential pollution sources contained in the plan, 2) determine the effectiveness of the plan, and 3) assess compliance with the terms and conditions of the permit. Where compliance evaluation schedules overlap with inspections required under *3.a.(3)(d)*, the compliance evaluation may be conducted in place of one such inspection.

4. Numeric Effluent Limitations. There are no additional numeric effluent limitations beyond those described in *Part IV.B.* of this permit.

5. Monitoring and Reporting Requirements.

a. Analytical Monitoring Requirements. During the second and fourth year of the permit, permittees with dimension and crushed stone, and nonmetallic minerals (except fuels), and sand and gravel mining activities must monitor their storm water discharges associated with industrial activity at least quarterly, except as provided in paragraphs *5.a.(3)* (Sampling Waiver), *5.a.(4)* (Representative Discharge), and *5.a.(5)* (Alternative Certification). Such facilities are required to monitor their storm water discharges for the pollutants of concern listed in Table J-1 below. Facilities must report in accordance with *5.b.* (Reporting). In addition to the parameters listed in Table J-1 below, the permittee shall provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.

Table J-1.
Monitoring Requirements

Pollutants of Concern	Benchmark Cut-Off Concentration	Numeric Limitation
Sand and Gravel Mining and Mine Dewatering Activities at Construction Sand and Gravel and Crushed Stone Mining facilities		
pH		6.0-9.0
Nitrate plus Nitrite Nitrogen	0.68 mg/L	
Total Suspended Solids (TSS)	100 mg/L	25mg/L, mo. ave, 35mg/L, daily max.
Dimension and Crushed Stone and Nonmetallic Minerals (except fuels)		
Total Suspended Solids (TSS)	100 mg/L	

1) Monitoring Periods. Facilities subject to analytical monitoring requirements shall monitor samples collected during the sampling periods of: January through March, April through June, July through September, and October through December for the years specified in paragraph *a.* (above).

2) Sample Type. A minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or nonprocess water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

3) Sampling Waiver.

a) Adverse Conditions. When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next period and submit the data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

b) Low Concentration Waiver. When the average concentration for a pollutant calculated from all monitoring data collected from an outfall during the second year monitoring period, is less than the corresponding value for that pollutant listed in Table J-1 under the column Monitoring Cut-Off Concentration, a facility may waive monitoring and reporting requirements in the fourth year monitoring period. The facility must submit to the *Executive Secretary*, in lieu of the monitoring data, a certification that there has not been a significant change in industrial activity or the pollution prevention measures in area of the facility that drains to the outfall for which sampling was waived.

c) Inactive and Unstaffed Site. When a discharger is unable to conduct quarterly chemical storm water sampling at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirements as long as the facility remains inactive and unstaffed. The facility must submit to the *Executive Secretary*, in lieu of monitoring data, a certification statement on the *Storm Water Discharge Monitoring Report* (*SWDMR*) stating that the site is inactive and unstaffed so that collecting a sample during a qualifying event is not possible.

4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan. The permittee shall include the description of the location of the outfalls, explanation of why outfalls are expected to discharge substantially identical effluents, and estimate of the size of the drainage area and runoff coefficient with the *Storm Water Discharge Monitoring Report* (*SWDMR*).

5) Alternative Certification. A discharger is not subject to the monitoring requirements of this section provided the discharger makes a certification for a given outfall or on a pollutant-by-pollutant basis in lieu of monitoring reports required under paragraph *b.* below, under penalty of law, signed in accordance with *Part VI.G.* (Signatory Requirements), that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to *DWQ* in accordance with *Part V.B.* of this permit. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under paragraph *b.* below. If the permittee cannot certify for an entire period, they must submit the date exposure

was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent guidelines.

b. Reporting. Permittees with dimension and crushed stone, sand and gravel or nonmetallic mineral (except fuels) mining facilities shall submit monitoring results for each outfall associated with industrial activity [or a certification in accordance with Sections *(3)*, *(4)*, or *(5)* above] obtained during the second year reporting period on *Storm Water Discharge Monitoring Report* (*SWDMR*) form(s) postmarked no later than the 31st day of the following March. Monitoring results [or a certification in accordance with Sections *(3)*, *(4)*, or *(5)* above] obtained during the fourth year reporting period, shall be submitted on *SWDMR* form(s) postmarked no later than the 31st day of the following March. For each outfall, one signed *SWDMR* form must be submitted to the *Executive Secretary* per storm event sampled. Signed copies of *SWDMR*s, or said certifications, shall be submitted to the *Executive Secretary* at the address listed in *Part V.B.* of the permit.

1) Additional Notification. In addition to filing copies of discharge monitoring reports in accordance with paragraph *b.* (above), sand and gravel mining facilities with at least one storm water discharge associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) must submit signed copies of *SWDMR*s to the operator of the municipal separate storm sewer system in accordance with the dates provided in paragraph *b.* (above).

c. Quarterly Visual Examination of Storm Water Quality. Mineral mining and processing facilities covered under this sector shall perform and document a visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted below. The examinations must be made at least once in each designated period [described in *(1)*, below] during daylight hours unless there is insufficient rainfall or snow melt to produce a runoff event.

1) Visual Monitoring Periods. Examinations shall be conducted in each of the following periods for the purposes of visually inspecting storm water quality associated with storm water runoff or snow melt: January through March; April through June; June through September; and October through December.

2) Sample and Data Collection. Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual will carry out the collection and examination of discharges for the life of the permit.

3) Adverse Conditions. When a discharger is unable to collect samples over the course of the visual examination period as a result of adverse climatic conditions, the discharger must document the reason for not performing the visual examination and

retain this documentation onsite with the records of the visual examinations. Adverse weather conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

4) Visual Storm Water Discharge Examination Reports. Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

5) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies to the substantially identical outfalls provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explaining in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.

6) Inactive and Unstaffed Site. When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.

APPENDIX F

SOIL TYPES AND DESCRIPTIONS

The mining areas are type 447, Mussentuchit-Goblin-Robroost association, 3% to 20% slopes, and type 443, Robroost-Mussentuchit association, 2% to 12% slopes.

LOCATION GOBLIN UT

Established Series
Rev. JMD/RLM/MJD
08/2006
GOBLIN SERIES

The Goblin series consists of shallow, well drained, moderately rapidly permeable soils that formed in gypsiferous shale and sandstone on eroding pediments. Slopes range from 1 to 50 percent. Average annual precipitation is about 8 inches and mean annual temperature is about 50 degrees F.

TAXONOMIC CLASS: Loamy, gypsic, mesic, shallow Typic Torriorthents

TYPICAL PEDON: Goblin loam-rangeland. (Colors are for air-dry soil unless otherwise noted.)

A--0 to 3 inches; light reddish brown (2.5YR 6/4) loam, red (2.5YR 4/6) moist; weak fine granular structure; slightly hard, very friable; few fine roots; few fine tubular pores; slightly calcareous; carbonates are disseminated; moderately alkaline (pH 8.2); clear smooth boundary. (1 to 4 inches thick)

Cy--3 to 12 inches; yellowish red (5YR 5/6) loam, yellowish red (5YR 4/6) moist; weak subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine, few medium roots; few fine tubular pores; common gypsum crystals and veining; moderately calcareous; carbonates are disseminated; moderately alkaline (pH 8.4); clear smooth boundary. (4 to 18 inches thick)

Cr--12 inches; gypsiferous shale.

TYPE LOCATION: Wayne County Utah; 11 miles north, 4 miles west of Caineville, Utah; northwest 1/4, northeast 1/4 sec. 1, T. 27 S., R. 6 E.

RANGE IN CHARACTERISTICS:

Soil moisture: Typic aridic moisture regime.

Mean annual soil temperature: 47 to 57 degrees F.

Depth to shale: 5 to 20 inches

Rock fragments: 0 to 35 percent

A horizon
Hue: 2.5YR through 10YR
Value of 5 through 7 dry, 5 to 8 moist
Chroma of 4 through 6.

Cy horizon
Hue: 2.5YR through 10YR
Value: 5 through 8 dry, 5 to 8 moist

Chroma: 0 through 6
Texture: loam, fine sandy loam and loamy very fine sand.

COMPETING SERIES: There are no competing series.

GEOGRAPHIC SETTING: Goblin soils are on eroding pediment surfaces at elevations of 4,000 to 6,000 feet. Slopes are 1 to 50 percent. The soils formed in calcareous and gypsiferous alluvium and residuum of weathered shale and sandstone with some eolian influence. The mean annual temperature is about 45 to 59 degrees F., and the average annual precipitation is about 5 to 10 inches. The average freeze-free period is 120 to 180 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Sheppard, Robroost and Trachute soils. The Sheppard, Robroost and Trachute soils are all very deep.

DRAINAGE AND PERMEABILITY: Well drained; rapid runoff; moderately rapid permeability.

USE AND VEGETATION: Used mainly for rangeland and wildlife habitat. Potential native vegetation is galleta, Indian ricegrass, shadscale, and Mormon-tea.

DISTRIBUTION AND EXTENT: Southeastern Utah and Northern Arizona. The soils of this series are moderately extensive. MLRAs 35 and 43.

MLRA OFFICE RESPONSIBLE: Phoenix, Arizona

SERIES ESTABLISHED: Wayne County, Utah, (Henry Mountains Area), 1985. Named after Goblin Valley State Park in the survey area.

REMARKS: Diagnostic horizons and features in this pedon include:

Ochric epipedon - the zone from 0 to 3 inches (A horizon).

In Utah this series is correlated with Desert range sites.

National Cooperative Soil Survey
U.S.A.

http://www2.ftw.nrcs.usda.gov/osd/dat/G/GOBLIN.html

MUSSENTUCHIT SERIES

The Mussentuchit series consists of moderately deep, well drained, moderately rapidly permeable soils formed in eolian deposits and/or slope alluvium over residuum weathered from gypsiferous sandstone and shale. Mussentuchit soils are on cuestas, hills and structural benches and have slopes of 3 to 35 percent. The average annual precipitation is about 7 inches and the mean annual temperature is about 49 degrees F.

TAXONOMIC CLASS: Coarse-loamy, gypsic, mesic Leptic Haplogypsids

TYPICAL PEDON: Mussentuchit gravelly loam--rangeland. (Colors are for air-dry soil unless otherwise stated.) The surface is covered by about 20 percent angular chert gravel.

A--0 to 2 inches; light reddish brown (5YR 6/4) interior, gravelly loam, yellowish red (5YR 4/6) interior, moist; moderate medium platy structure; friable, soft, slightly sticky, nonplastic; common medium, fine and very fine roots; few fine interstitial and medium vesicular and tubular pores; 3 percent gypsum; 23 percent gravel; slightly effervescent (21 percent calcium carbonate equivalent), carbonates are finely disseminated; slightly alkaline (pH 7.8); abrupt wavy boundary. (0 to 7 inches thick)

By--2 to 13 inches; 60 percent reddish yellow (5YR 7/6) interior and 40 percent pinkish white (5YR 8/2) interior, fine sandy loam, yellowish red (5YR 4/6) rubbed, moist; massive; friable, slightly hard, nonsticky, nonplastic; common medium, fine and very fine roots; few medium and common fine tubular pores; common medium irregular gypsum crystals (55 percent gypsum); 1 percent gravel; slightly effervescent (10 percent calcium carbonate equivalent), carbonates are finely disseminated; slightly alkaline (pH 7.8); abrupt irregular boundary. (6 to 32 inches thick)

Cy1--13 to 23 inches; 70 percent pink (5YR 8/4) interior and 30 percent pinkish white (5YR 8/2) interior, fine sandy loam, reddish brown (5YR 5/4) rubbed, moist; massive; very firm, very hard, nonsticky, nonplastic; few fine and very fine roots; common coarse interstitial pores; many coarse irregular gypsum crystals (48 percent gypsum); 1 percent gravel; slightly effervescent (10 percent calcium carbonate equivalent), carbonates are finely disseminated; slightly alkaline (pH 7.7); abrupt irregular boundary.

Cy2--23 to 38 inches; 70 percent reddish brown (5YR 5/4) interior and 30 percent pinkish white (5YR 8/2) interior, gravelly fine sandy loam, reddish brown (5YR 5/4) rubbed, moist; massive; firm, hard, nonsticky, nonplastic; few fine and very fine roots; common coarse interstitial pores; many very coarse irregular gypsum crystals (47 percent gypsum); 25 percent gravel; slightly effervescent (8 percent calcium carbonate equivalent), carbonates are finely disseminated; slightly alkaline (pH 7.7); abrupt smooth boundary. (0 to 22 inches thick) Cr--38 inches; 70 percent reddish brown (5YR 5/4) interior and 30 percent pinkish white (5YR 8/2) interior, moderately cemented calcareous shale bedrock, yellowish red (5YR 4/6) rubbed, moist; slightly effervescent (15 percent calcium carbonate equivalent); moderately alkaline (pH 8.2).

TYPE LOCATION: Emery County, Utah, about 6 miles southeast of Moore; about 1,600 feet west and 1,800 feet north of the southeast corner of sec. 5, T. 22 S., R. 8 E.; Short Canyon USGS quad; Lat. 38 degrees 55 minutes 45 seconds N., Long. 111 degrees 02 minutes 36 seconds W., NAD 83.

RANGE IN CHARACTERISTICS:

Soil moisture: The moisture control section is usually dry, but intermittently moist during late summer and early fall. Aridic moisture regime.
Mean annual soil temperature: 47 to 56 degrees F.
Depth to paralithic contact: 20 to 40 inches, bedrock is soft gypsiferous shale or sandstone.
Depth to gypsic horizon: 2 to 7 inches.

Particle-size control section (weighted average:
Clay content: 6 to 18 percent.
Rock fragment content: 0 to 35 percent, mainly gravel with up to 15 percent cobbles of gypsiferous sandstone.

A horizon:
Hue: 5YR or 7.5YR
Value: 5 or 6 dry, 4 or 5 moist
Chroma: 4 to 6dry or moist
Texture: very fine sandy loam, fine sandy loam, gravelly loam
Clay content: 5 to 20 percent
Rock fragments: 0 to 30 percent gravel and channers; few cobbles
Calcium carbonate equivalent: 5 to 25 percent (no visible secondary carbonates present)
Gypsum: 1 to 15 percent
EC (mmhos/cm): 0 to 4
SAR: 0 to 5
Reaction: 7.4 to 8.4

Bw horizon (when present):
Hue: 5YR or 7.5YR
Value: 5 to 8 dry; 4 to 6 moist
Chroma: 2 to 6 dry or moist
Texture: fine sandy loam
Clay content: 5 to 18 percent
Rock fragments: 0 to 10 percent gravel
Calcium carbonate equivalent: 5 to 20 percent (no visible secondary carbonates present)
Gypsum: 1 to 15 percent
EC (mmhos/cm): 0 to 4
SAR: 0 to 1
Reaction: 7.4 to 8.4

By, BCy present in some pedons, and Cy horizons:
Hue: 5YR or 7.5YR
Value: 5 to 8 dry, 4 to 6 moist
Chroma: 2 to 6 dry or moist
Texture: channery loam, fine sandy loam, channery sandy loam, loamy fine sand, parachannery fine sandy loam, gravelly fine sandy loam, sandy loam
Clay content: 2 to 20 percent
Rock fragments: 0 to 35 percent total; 0 to 35 percent gravel and channers; 0 to 3 percent cobbles
Gypsum: 30 to 80 percent, occurring as fine to large crystals
Calcium carbonate equivalent: 5 to 20 percent (no visible secondary carbonates present)

EC (mmhos/cm): 0 to 4
SAR: 0 to 5
Reaction: 7.4 to 8.4

COMPETING SERIES: These are McCullan (AZ), Netoma (NM) and Rayohill (NM) series. Netoma and McCullan soils are deeper than 40 inches to a lithic or paralithic contact. Rayohill soils have 1 to 5 percent calcium carbonate equivalent and have electrical conductivity of greater than 4 mmhos/cm.

GEOGRAPHIC SETTING: Mussentuchit soils occur on hills, cuestas and structural benches at elevations of 4,300 to 7, 200 feet. Slopes are 3 to 35 percent. Mussentuchit soils formed in eolian deposits and/or slope alluvium over residuum weathered from gypsiferous sandstone and shale.The mean annual precipitation ranges from 5 to 12 inches. Wettest months are July to October and driest months are December and June.mean annual temperature is 45 to 54 degrees F.; and the freeze-free period is 120 to 160 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Goblin and Robroost soils. Goblin soils are less than 20 inches deep to weathered sandstone or shale. Robroost soils are more than 40 inches deep to bedrock.

DRAINAGE AND PERMEABILITY: Well drained, low to high runoff, and moderately rapid permeability.

USE AND VEGETATION: Used for rangeland and wildlife habitat. The potential vegetation is galleta, Indian ricegrass, Mormon-tea, and shadscale.

DISTRIBUTION AND EXTENT: Southeastern Utah. This series is not extensive. LRR D, MLRAs 34B & 35.

MLRA OFFICE RESPONSIBLE: Lakewood, Colorado

SERIES ESTABLISHED: Capital Reef National Park, 2008. The name is from Mussentuchit Flat in an area where this soil is mapped.

REMARKS: Laboratory sample number 84UT-015-007

Diagnostic horizons and features recognized in this pedon are:
Series control section: 0 to 48 inches (0 to 122 cm)
Ochric epipedon: The zone from the surface to 2 inches (A horizon).
Gypsic horizon: The zone from 2 to 38 inches (By, Cy1, Cy2 horizons).

OSED scanned by SSQA.

In October 2000, taxonomic classification was converted to the closest match found in Soil Taxonomy, Second Edition 1999. No update was made to horizon nomenclature, competing series section, etc. Other placements may be more appropriate after a complete update.

In August 2007 classification was changed to Leptic Haplogypsids from Typic Calcigypsids with Soil Taxonomy, Tenth Edition 2006. Horizon nomenclature and

competing section was updated. Further examination of particle-size class is pending after possible revisions to psc determination methodology by Gypsum Task Force; current particle-size class is fine-loamy according to Keys to Soil Taxonomy, Tenth Edition, 2006.

In May 2008 the series was updated for the Emery SS and changed to established. Mussentuchit was correlated in the Capital Reef Soil Survey (UT685) in 11/1990. Somehow making Mussentuchit established was overlooked at the time of the Capital Reef Final Correlation. The original classification was coarse-loamy, gypsic, mesic, Typic Cacligypsids. Mussentuchit does not have secondary carbonates.

National Cooperative Soil Survey
U.S.A.

http://www2.ftw.nrcs.usda.gov/osd/dat/M/MUSSENTUCHIT.html

LOCATION ROBROOST UT

Established Series
Rev. JMD/RLM/RLB
02/2007
ROBROOST SERIES

The Robroost series consists of very deep, well drained, moderately permeable soils that formed in mixed alluvium and eolian deposits from gypsiferous sandstone and shale on alluvial fans and plains. Slopes range from 2 to 15 percent. The average annual precipitation is about 6 inches and mean annual temperature is about 50 degrees F.

TAXONOMIC CLASS: Coarse-loamy, mixed, active, mesic Typic Calcigypsids

TYPICAL PEDON: Robroost fine sandy loam, rangeland. (Colors are for air-dry soil unless otherwise noted.)

A--0 to 5 inches; light reddish brown (5YR 6/3) fine sandy loam, reddish brown (5YR 4/4) moist; weak thin platy structure; soft, very friable, few fine roots; few fine pores; strongly calcareous; carbonates are disseminated; moderately alkaline (pH 8.2); clear wavy boundary. (2 to 5 inches thick)

By--5 to 10 inches; light reddish brown (5YR 6/3) loam, reddish brown (5YR 5/3) moist; weak fine prismatic structure parting to weak, medium and fine subangular blocky; slightly hard, very friable, slightly plastic; few fine and medium roots; few fine pores; strongly calcareous; carbonates are disseminated; few thin veins and streaks of gypsum; moderately alkaline (pH 8.2); clear wavy boundary. (0 to 16 inches thick)

Byk1--10 to 30 inches; light reddish brown (5YR 6/3) loam, reddish brown (5YR 5/3) moist; weak coarse prismatic structure; slightly hard, very friable, slightly plastic; few fine and very few medium roots; few fine pores; many medium and large gypsum veins and splotches; strongly calcareous; carbonates are disseminated and in veins; moderately alkaline (pH 8.2); gradual wavy boundary. (20 to 40 inches thick)

Byk2--30 to 60 inches; light reddish brown (5YR 6/3) loam, reddish brown (5YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; very few medium and fine roots; few fine pores; common gypsum veins and splotches; strongly calcareous; carbonates are in veins and fine splotches; moderately alkaline (pH 8.2).

TYPE LOCATION: Wayne County, Utah; 3 miles south, 1 mile east of Hanksville, Utah; NE 1/4, sec. 34, T. 28., R. 11 E.

RANGE IN CHARACTERISTICS:
Soil moisture: usually dry in all parts of the moisture control section 50 to 75 percent of the time that the soil temperature at a depth of 20 inches exceeds 41 degrees F. Typic aridic moisture regime
Depth to gypsic horizon: 2 to 32 inches
Total carbonates plus gypsum is 40 percent or less (by weight)
Depth to calcic horizon: 2 to 18 inches
Percent calcium carbonates: 5 to 24 percent
Percent gypsum: 5 to 32 percent

Particle-size control section -
Clay content: less than 18 percent clay.
Other features: Some pedon contains Bw, Bk or Cy horizons

A horizon
Hue: 5YR or 7.5YR.
Value: 5 or 6 dry, or moist
Chroma: 3 to 6.
Reaction: slightly alkaline to strongly alkaline.

By horizon
Hue: 5YR or 7.5YR.
Value: 5 to 7 dry, or moist
Chroma: 3 to 6
Texture: fine sandy loam, very fine sandy loam, sandy loam or loam
Reaction: slightly alkaline to strongly alkaline.
Calcium carbonates equivalent: 3 to 15 percent
Percent gypsum: 10 to 35 percent

Byk horizon
Hue: 5YR or 7.5YR.
Value: 4 to 8 dry, or moist
Chroma: 3 to 6.
Texture: fine sandy loam, very fine sandy loam, sandy loam or loam.
Calcium carbonate equivalent: 8 to 30 percent
Percent gypsum: 5 to 30
Bk horizon (when present)

Hue: 5YR or 7.5YR
Value: 4 to 7 dry, or moist
Chroma: 3 to 6
Texture: Fine sandy loam, very fine sandy loam or loam
Calcium carbonate equivalent: 8 to 35 percent
Gypsum percent: 0 to 3 percent
Reaction: slightly or moderately alkaline

Cy horizon (when present)
Other features: Usually contains parachanners or paragravels from underlying bedrock and the gypsum are usually weathering from parent material.
Gypsum percent: 5 to 35 percent
Reaction: slightly to strongly alkaline.

COMPETING SERIES: The Brimhall (NM) series. Brimhall soils have 10YR and 2.5Y hues; bedrock is at 40 to 60 inches.

GEOGRAPHIC SETTING: Robroost soils are on alluvial fans and plains at elevations of 4,000 to 5,000 feet. Slopes are 2 to 15 percent. The soils formed in coarse textured alluvial and eolian deposits from gypsiferous sandstone and shale. The mean annual air temperature is about 50 to 52 degrees F. and the average annual precipitation is about 5 to 10 inches. The precipitation is fairly well distributed throughout the year. There is a

slight bulge during August, September and October, with the driest months being May and June. The average freeze-free period is about 145 to 160 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the Chipeta and Goblin and Mussentuchit soils. Chipeta and Goblin soils have paralithic contacts at less than 20 inches. Mussentuchit soils have a paralithic contact at 20 to 40 inches. These soils are on shale hills.

DRAINAGE AND PERMEABILITY: Well drained; slow runoff; moderate permeability.

USE AND VEGETATION: These soils are used mainly for rangeland and wildlife habitat. Potential native vegetation is galleta, alkali sacaton, shadscale, Mormon-tea and winterfat.

DISTRIBUTION AND EXTENT: Southeastern Utah. The soils of this series are moderately extensive; their total acreage is about 13,000 acres. MLRA is 35.

MLRA OFFICE RESPONSIBLE: Phoenix, Arizona

SERIES ESTABLISHED: Henry Mountains Area, Parts of Garfield, Kane and Wayne Counties, Utah, 1985. Named after Robbers Roost. A historical setting in the survey area.

REMARKS: Diagnostic horizon and features recognized in this pedon are:
Ochric epipedon the zone from 0 to 5 inches (A horizon)
Gypsic horizon the zone from 5 to 60 inches (By, Byk1, Byk2)
Calcic horizon the zone from 10 to 60 inches (Byk1 and Byk2)

Additional Data: NSSL data numbers; S82UT 037 006 and S84UT 015 008.

National Cooperative Soil Survey
U.S.A.

http://www2.ftw.nrcs.usda.gov/osd/dat/R/ROBROOST.html

Emery Area, Utah
Parts of Emery, Carbon, Grand, and Sevier Counties Version date: 9/21/2007 10:49:36 AM

1. 447—Mussentuchit-Goblin-Robroost association, 3 to 20 percent slopes

Map Unit Setting

Elevation: 4,300 to 6,200 feet
Mean annual precipitation: 6 to 9 inches
Mean annual air temperature: 48 to 53 degrees F
Frost-free period: 130 to 160 days

Map Unit Composition

Mussentuchit and similar soils: 45 percent
Goblin and similar soils: 25 percent
Robroost and similar soils: 20 percent

Description of Mussentuchit

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Slope alluvium over residuum weathered from gypsiferous shale and sandstone

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Gypsum, maximum content: 60 percent
Maximum salinity: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 3.0
Available water capacity: Low (about 3.8 inches)

Interpretive groups

Land capability (nonirrigated): 7e
Ecological site: Desert Shallow Gypsum (R034XY116UT)

Typical profile

0 to 2 inches: Fine sandy loam
2 to 4 inches: Fine sandy loam
4 to 30 inches: Fine sandy loam
30 to 35 inches: Loamy fine sand
35 to 39 inches: Bedrock

Description of Goblin

Setting

Landform: Hills
Landform position (two-dimensional): Footslope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Slope alluvium over residuum weathered from gypsiferous shale and sandstone

Properties and qualities

Slope: 5 to 20 percent
Depth to restrictive feature: 5 to 20 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high
(0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Gypsum, maximum content: 60 percent
Maximum salinity: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water capacity: Very low (about 1.9 inches)

Interpretive groups

Land capability (nonirrigated): 7e
Ecological site: Desert Shallow Gypsum (R034XY116UT)

Typical profile

0 to 3 inches: Fine sandy loam
3 to 17 inches: Fine sandy loam
17 to 21 inches: Bedrock

Description of Robroost

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Slope alluvium derived from gypsiferous sandstone and shale

Properties and qualities

Slope: 3 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57
to 1.98 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Gypsum, maximum content: 35 percent
Maximum salinity: Nonsaline to moderately saline (2.0 to 12.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water capacity: Moderate (about 8.0 inches)

Interpretive groups

Land capability (nonirrigated): 7e
Ecological site: Desert Gypsum (R034XY105UT)

Typical profile

0 to 3 inches: Loamy very fine sand
3 to 11 inches: Very fine sandy loam
11 to 31 inches: Very fine sandy loam
31 to 65 inches: Fine sandy loam
65 to 80 inches: Fine sandy loam

APPENDIX G

Training Records

SWPPP Training Record and Attendance Log

This form is used to record the annual or new employee training sessions. Make sure that all attendees sign this form. Following the training session, append a copy of this form to the Storm Water Pollution Prevention Plan.

Topics of discussion should include:

- General Facility Operations and Configuration
- Contents of the SWPPP Plan
- Facility Inspection Requirements and Reports
- Historic/Potential Spill or Discharge Events
- BMP Installation and Selection
- Monitoring Reports (If applicable)

Additional topics that were covered in this SWPPP training session:

Name	Signature	Date

APPENDIX H

Inspection Reports

Utah Storm Water

BMP Inspection

Storm Water Inspection and Maintenance Report

Site Name/ID:	Inspection Frequency ☐ Quarterly Inspection: ☐ Jan/Mar ☐ April/June ☐ July/Sept ☐ Oct/Dec ☐ Precipitation Event: Date_____ ☐ Other_____	
Permit #:		
Location:		
Weather:		
Inspector Signature:	Inspector Title:	Inspection Date:

Site Specific BMP Inspection

BMP Type	Location	Status Code	Required Action or Comments (Describe all deficiencies)	Date of Corrective Action

Status Code

G: Good (No Action)
D: Damaged (Repair Needed)
I: Ineffective (Not Performing as Expected)
R: Replacement (Needs Replaced)
N: Needs Installation

Additional:

A1: _____

A2: _____

A3: _____

BMP Type

1. Brush Barrier
2. Check Dam
3. Culvert Outlet Protection
4. Culvert
5. Drain Inlet Protection
6. Drainage Swale
7. Earth Dike
8. Gabions
9. Gravel Filter Berm
10. Gravel Surfacing
11. Interceptor Dike or Swale
12. Level Spreader
13. Manmade Stabilization
14. Pipe Slope Drain
15. Retaining Wall
16. Riprap
17. Rolled Product
18. Sediment Basin
19. Sediment Trap
20. Silt Fence
21. Stabilized Construction Entrance/Gravel Tire Wash
22. Subsurface Drain
23. Terraced Slopes
24. Dry Retention /Detention Pond
25. Geotextiles
26. Infiltration Basin/Trench
27. Manmade Wetland
28. Mulching
29. Open Vegetated Swale
30. Permanent Seeding
31. Preserving Natural Vegetation
32. Slope Roughening
33. Sod Stabilization
34. Temporary Seeding
35. Vegetative Buffer Strips
36. Wet Retention/ Detention Ponds
37. Other: _____

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Storm Water Inspection and Maintenance Report

Site Observations

Does the SWPPP and Maps reflect the field conditions?	☐ Yes	☐ NO	☐ NA
Comments:			
Has the SWPPP and Maps been updated to reflect changes to the site and BMPs?	☐ Yes	☐ NO	☐ NA
Comments:			
Are there signs of offsite discharge around the perimeter of the site?	☐ Yes	☐ NO	☐ NA
Comments:			
Are there signs of offsite sediment tracking from vehicles?	☐ Yes	☐ NO	☐ NA
Comments:			
Are supplies, fuel tanks, chemicals and other potential pollutant sources properly stored and maintained to prevent discharges?	☐ Yes	☐ NO	☐ NA
Comments:			
Is there evidence of unaddressed spills or leaks?	☐ Yes	☐ NO	☐ NA
Comments:			
Are washout areas properly protected with appropriate BMPs and does the SWPPP properly outline the operation of washout areas?	☐ Yes	☐ NO	☐ NA
Comments:			
Has trash and waste been properly disposed of to prevent stormwater contamination?	☐ Yes	☐ NO	☐ NA
Comments:			
Are exposed slopes properly stabilized or protected?	☐ Yes	☐ NO	☐ NA
Comments:			
Are there any deficiencies in BMP installations or procedures?	☐ Yes	☐ NO	☐ NA
Comments:			
Was an inspection not possible due to severe weather, landowner issues or dangerous conditions; explain why:	☐ Yes	☐ NO	☐ NA
Comments:			

Additional Comments:

STORM WATER DISCHARGE MONITORING REPORT (SWDMR)
(For additional forms copy this form or contact the DWQ)

IDENTIFICATION & LOCATION

Name _____ Permit No. UTR _____

Mailing Address: _____

Location *(if different)* _____

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Monitoring Period:

From: Month _____ Day _____ Year _____ To: Month _____ Day _____ Year _____

Total Storm Water Discharge Points_____ Number assigned to this Discharge Point_____

INDUSTRY SECTOR(S)

Industrial Activities or Industry Sector(s) Drained by this Discharge:

- A. Timber Products Facilities
- B. Paper and Allied Products Manufacturing Facilities.
- C. Chemical and Allied Products Manufacturing Facilities.
- D. Asphalt Paving, Roofing Materials, and Lubricant Manufacturing Facilities.
- E. Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities.
- F. Primary Metals Facilities.
- G. Metal Mines (Ore Mining and Dressing).
- H. Coal Mines and Coal Mine-Related Facilities.
- I. Oil or Gas Extraction Facilities.
- J. Mineral Mining and Processing Facilities.
- K. Hazardous Waste Treatment Storage or Disposal Facilities.
- L. Landfills and Land Application Sites.
- M. Automobile Salvage Yards.
- N. Scrap Recycling and Waste Recycling Facilities.
- O. Steam Electric Power Generating Facilities.
- P. Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, the United States Postal Service, or Railroad Transportation Facilities.
- Q. Vehicle Maintenance Areas and Equipment Cleaning Areas of Water Transportation Facilities.
- R. Ship or Boat Building and Repair Yards.
- S. Vehicle Maintenance Areas, Equipment Cleaning Areas or Airport Deicing Operations located at Air Transportation Facilities.
- T. Wastewater Treatment Works.
- U. Food and Kindred Products Facilities.
- V. Textile Mills, Apparel and other Fabric Product Manufacturing Facilities.
- W. Furniture and Fixture Manufacturing Facilities.
- X. Printing and Publishing Facilities.
- Y. Rubber and Miscellaneous Plastic Product Manufacturing Facilities.
- Z. Leather Tanning and Finishing Facilities.
- AA. Facilities That Manufacture Metal Products including Jewelry, Silverware and Plated Ware.
- AB. Facilities That Manufacture Transportation Equipment, Industrial or Commercial Machinery.
- AC. Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods.
- AD. Non-Classified Facilities.

ANALYTICAL MONITORING DATA *(For sectors where it is required)*

Storm Event: *All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. This data must be submitted to the Division of Water Quality.*

Date of Storm Event	Month Day Year
Duration of Storm Event	Hours
Rain Fall Measurement	Inches
Time Elapsed Between Recorded & Previous Storm Event	Days
Estimated Total Volume of Discharge *(Include units; gal., ft³, etc.)*	

Please check if there has been no discharge of Storm Water during this reporting period. (If none please explain in comment section)	• No Discharge

Sample Type: *Data shall be reported for a grab sample taken during the first thirty minutes of the discharge. If the collection of a grab sample during the first thirty minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first thirty minutes was impracticable.*

Parameter	Effluent Limit *(If Applicable)*	*Concentration* *(Concentration quantity, for example -14.2)*	*Units* *(Example - mg/L)*

SIGNATURE

Name/Title Principle Executive Officer
(Typed or Printed)

_____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. 1001 and 33 U.S.C. 1319. (penalties under these statues may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

_____ _____

Signature of Principle Executive Officer or Authorized Agent *Date*

Comments:

INFORMATION

Adverse Weather Waiver. *When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next period and submit the data along with data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).*

Exemption to Monitoring Requirements. *(Does not apply to sector S or any Visual Monitoring Requirements.) As an alternative to monitoring an outfall, an annual certification may be made that material handling equipment or activities; raw or waste materials; intermediate, final, or by-products; industrial machinery or operations; and significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and will not be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to the DWQ in accordance with Part V.B of the permit. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under reporting requirements in the sector. If the permittee cannot certify for an entire period, they must submit the date exposure was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent limitations.*

When to Monitor and Report. *Samples must be collected and analyzed at least once during each three month monitoring period. Monitoring results must be submitted annually. See Reporting for dates.*

More Frequent Monitoring. *If sampling is conducted more frequently than semi-annually, <u>all</u> sampling results must be submitted. A separate SWDMR is required for each storm event sampled.*

How to Report. *A separate SWDMR form is required for each storm event and for each outfall sampled. SWDMRs must be signed and mailed to the Division of Water Quality, and must be postmarked by the date specified under Monitoring Periods and Reporting Deadlines. The permittee should retain a copy. The address and phone number for questions or to mail the SWDMR is:*

Department of Environmental Quality
Division of Water Quality
Attention Storm Water Coordinator
PO Box 144870
Salt Lake City, UT 84114-4870

(801) 538-6146

Substantially Identical Discharges. *If there is reason to believe that the discharges from two or more outfalls are substantially identical, one of the outfalls may be monitored and that data submitted for all substantially identical outfalls. A description of the location of the outfalls, an explanation of why the outfalls have substantially identical discharges, and the size of the drainage area and runoff coefficient must be submitted as an attachment to the SWDMR.*

VISUAL MONITORING REQUIREMENTS

Sample and Data Collection: *Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable the same individual will carry out the collection and examination of discharges for the life of the permit.*

COLOR (Circle the ones that apply):

1. Identification of Color.

Black Dark Grey Medium Grey Light Grey Dark Chocolate Brown Medium Brown

*Light Brown Tan Yellow Green Other*_____

2. Intensity of Color. Very intense Prominent Moderately Perceptible Hardly Perceptible

Comments: _____

_____

_____

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CLARITY (Circle the right one):

Totally Opague Slightly Translucent Translucent Nearly Transparent Transparent

ODOR (Circle the ones that apply):

Diesel Gasoline Petroleum Solvent Musty Sewage Chlorine

Rotten Egg Sulfur No Odor Noxious Other _____

Comments: _____

_____

_____

_____

SOLIDS

Floating Solids: (Description) _____

_____

_____

_____

Suspended and Settled Solids: (Description) _____

_____

_____

_____

FOAM, OIL SHEEN, OR OTHER OBVIOUS INDICATORS OF POLLUTION

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

APPENDIX I

BMP Examples

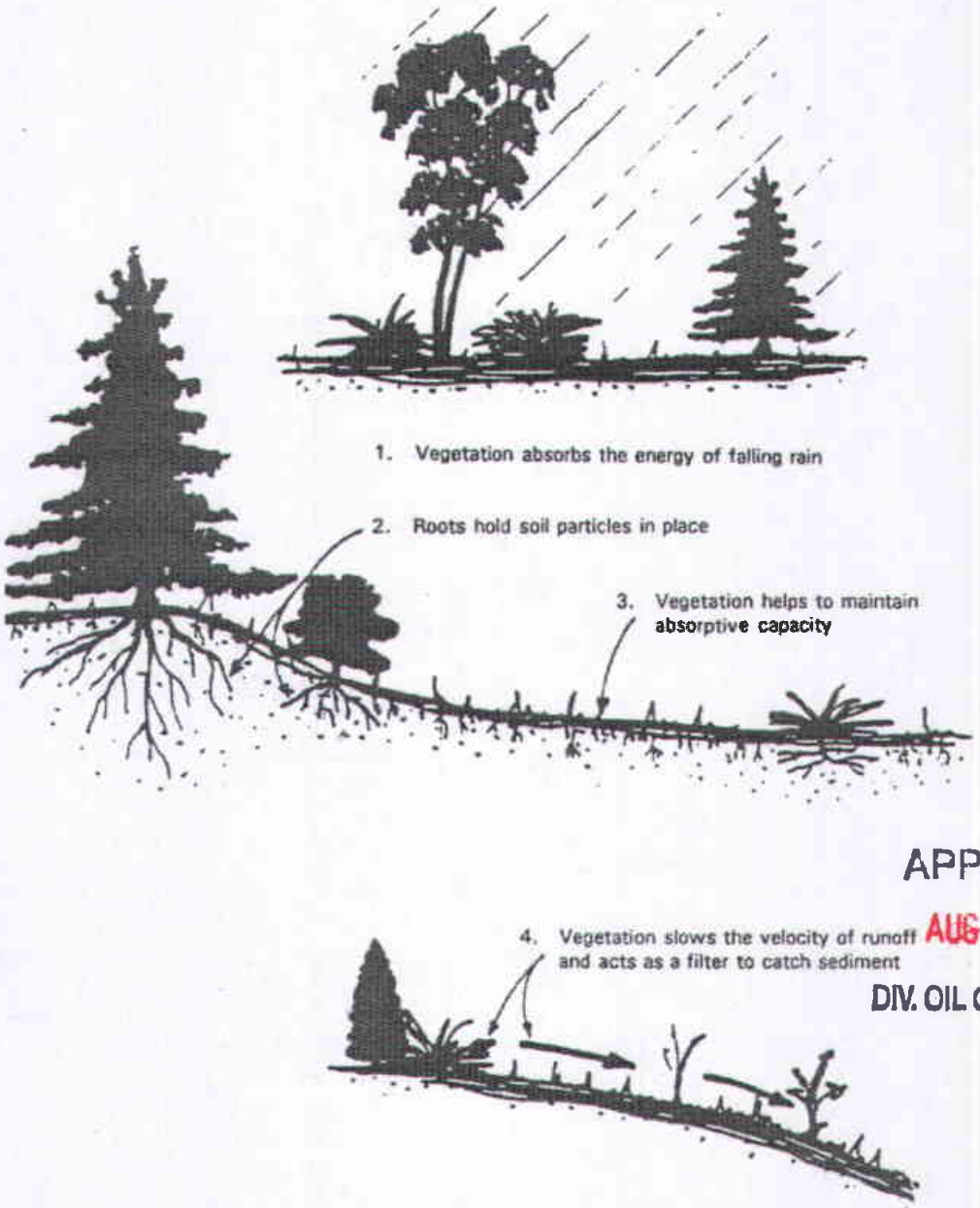

Figure 1. Preserving natural vegation
(from U.S. Environmental Protection Agency, 1992).

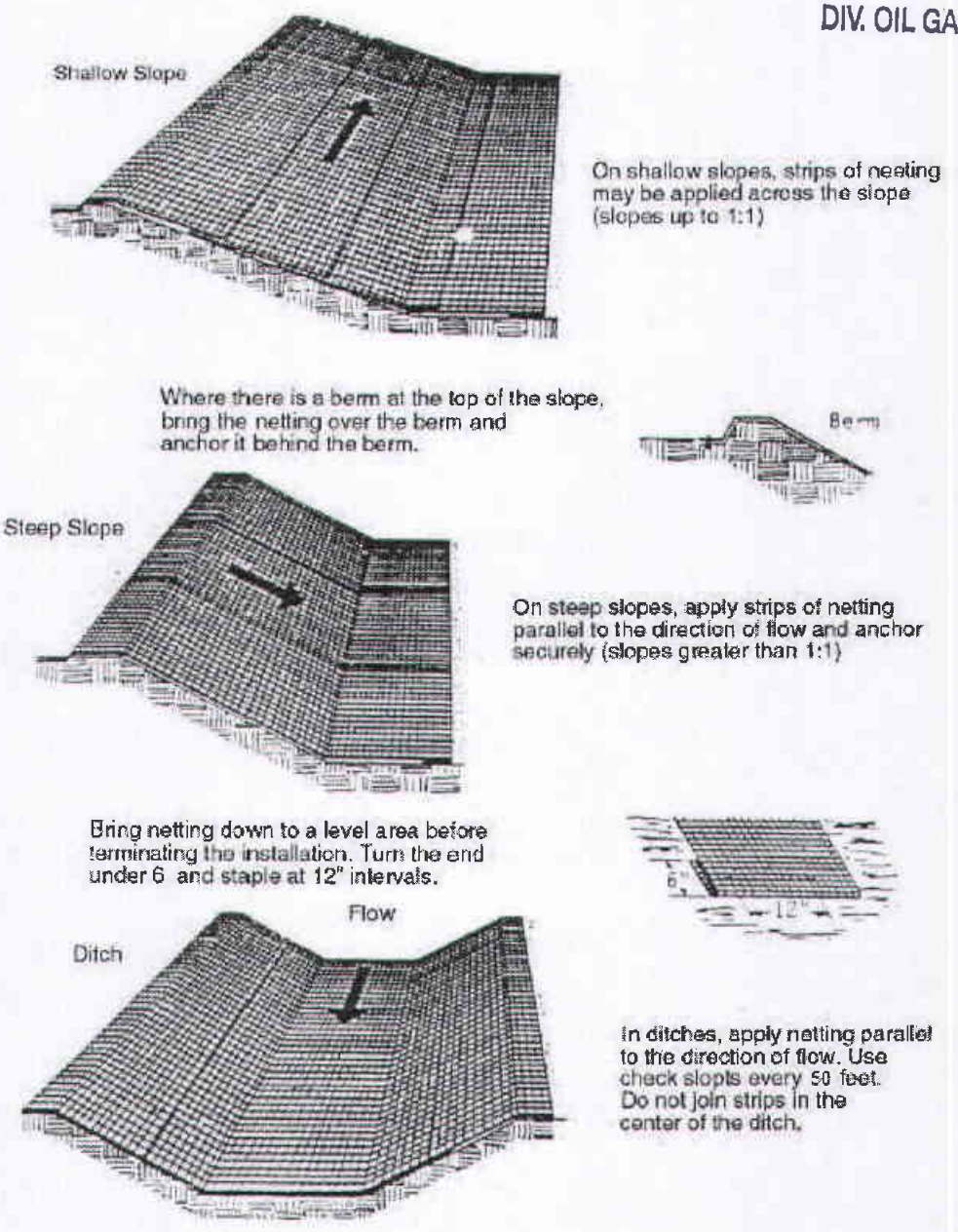

Figure 2. Geotextiles (modified from U.S. Environmental Protection Agency, 1992).

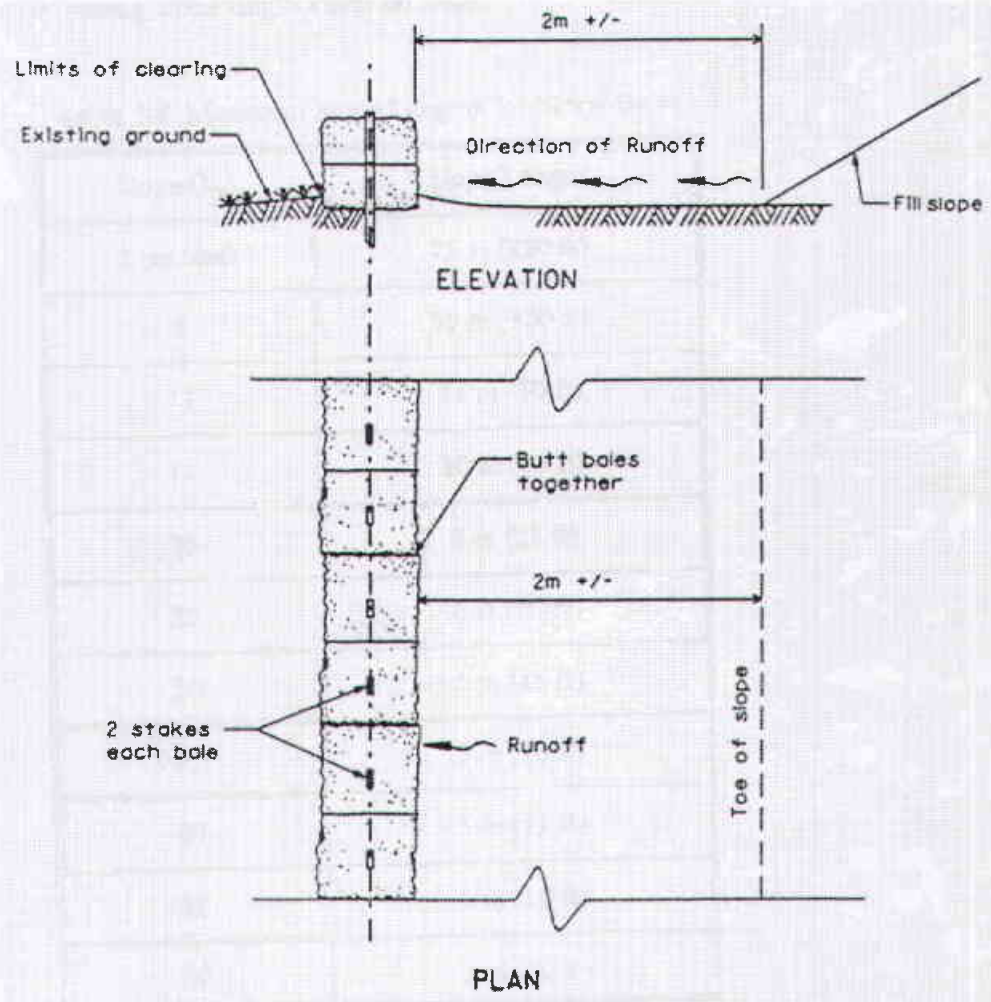

Figure 3. Straw bale as perimeter control
(from U.S. Department of Transportation, 1995).

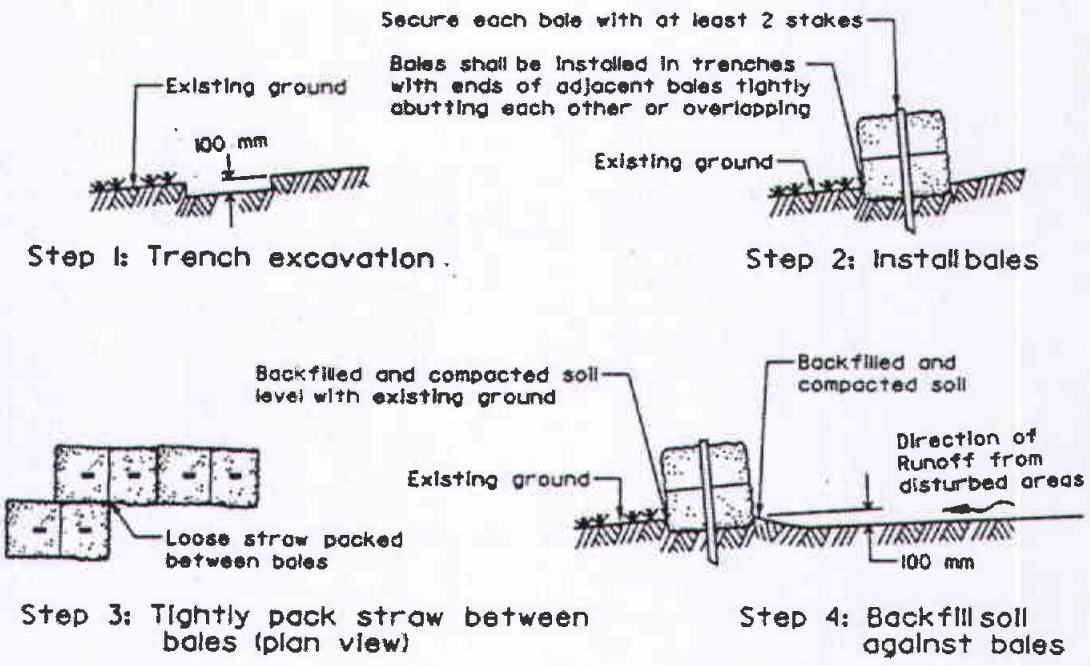

Figure 4. Straw bale installation (U.S. Department of Transportation, 1995).

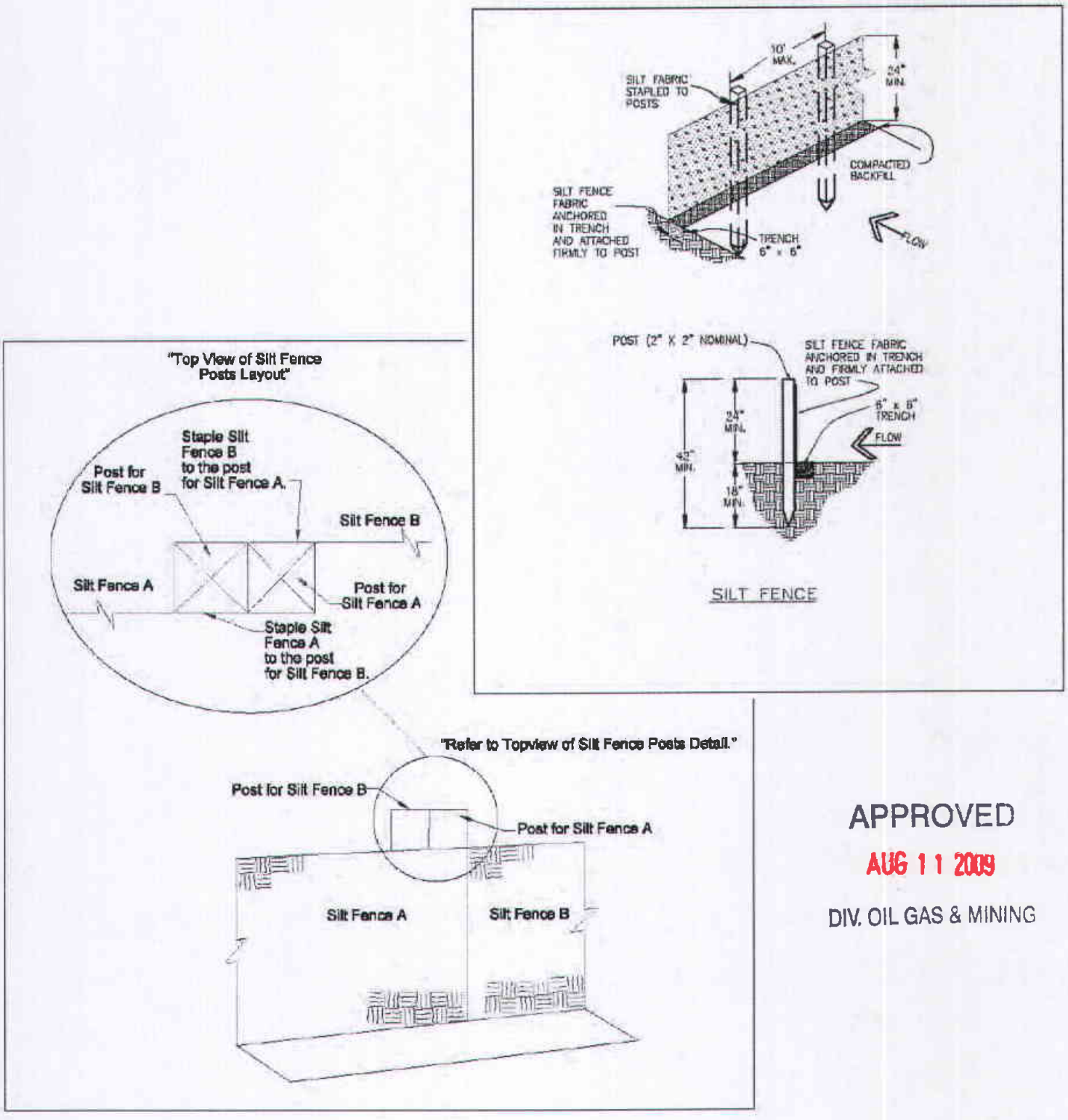

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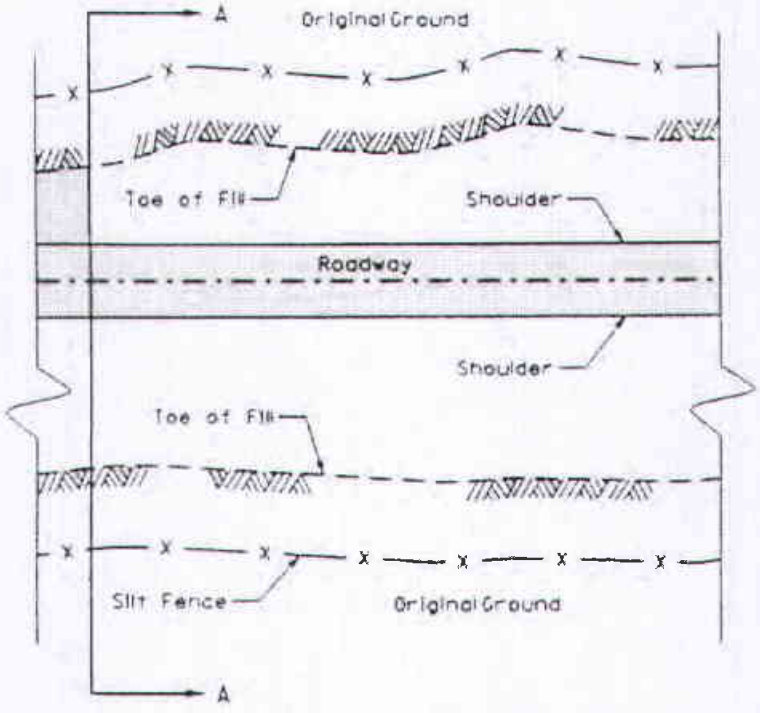
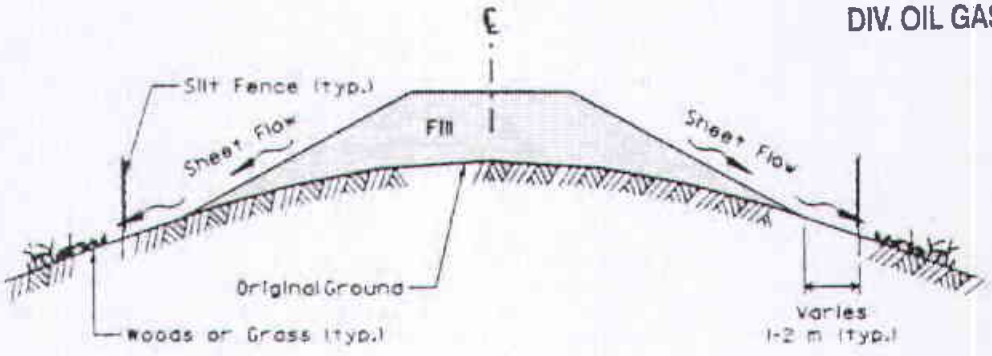
Figure 5. Silt Fence detail
(modified from Colorado Department of Transportation, 2002)



PLAN VIEW



SECTION A-A

Figure 6. Silt fence as perimeter control
(from U.S. Department of Transportation, 1995).

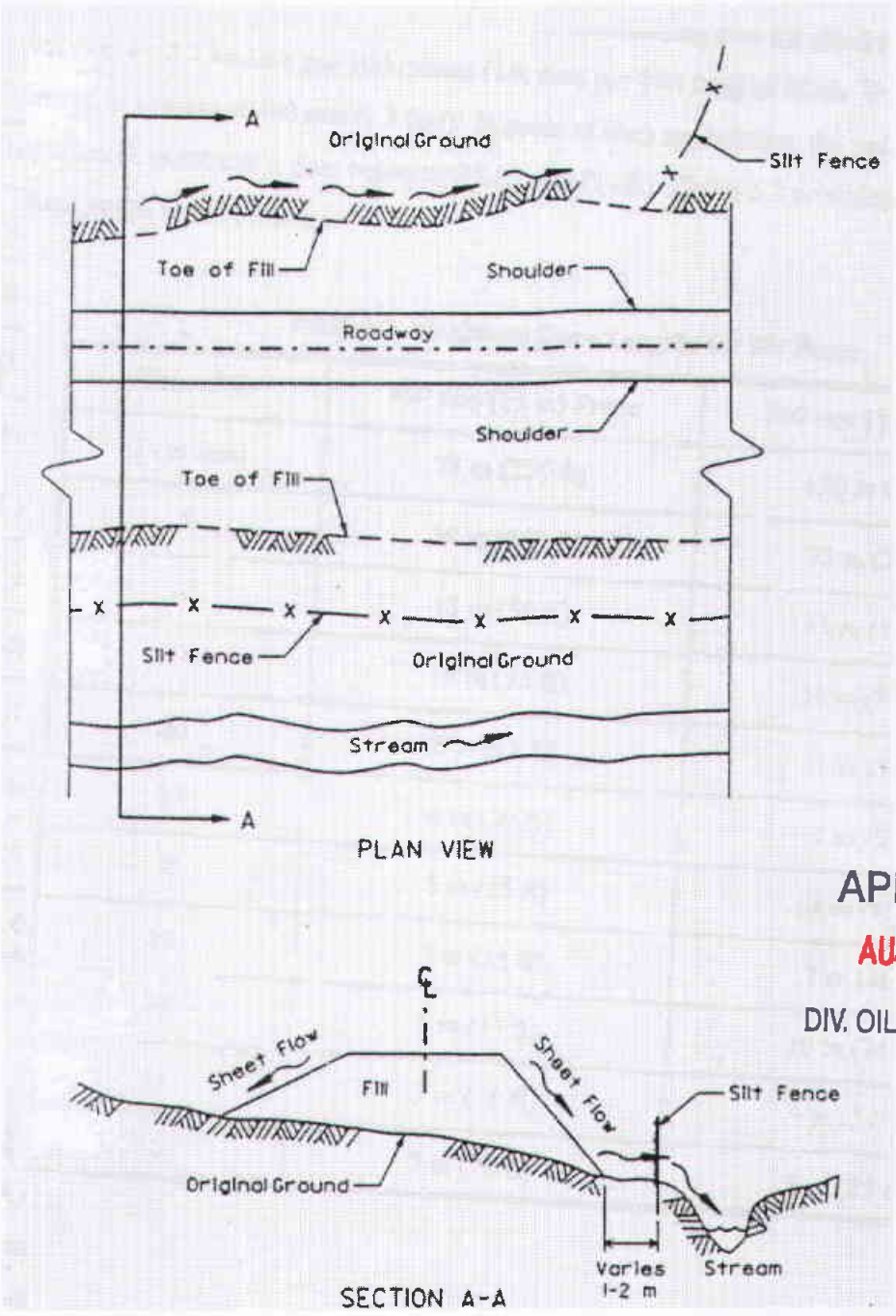


Figure 7. Silt fence protecting waterway
(from U.S. Department of Transportation, 1995).

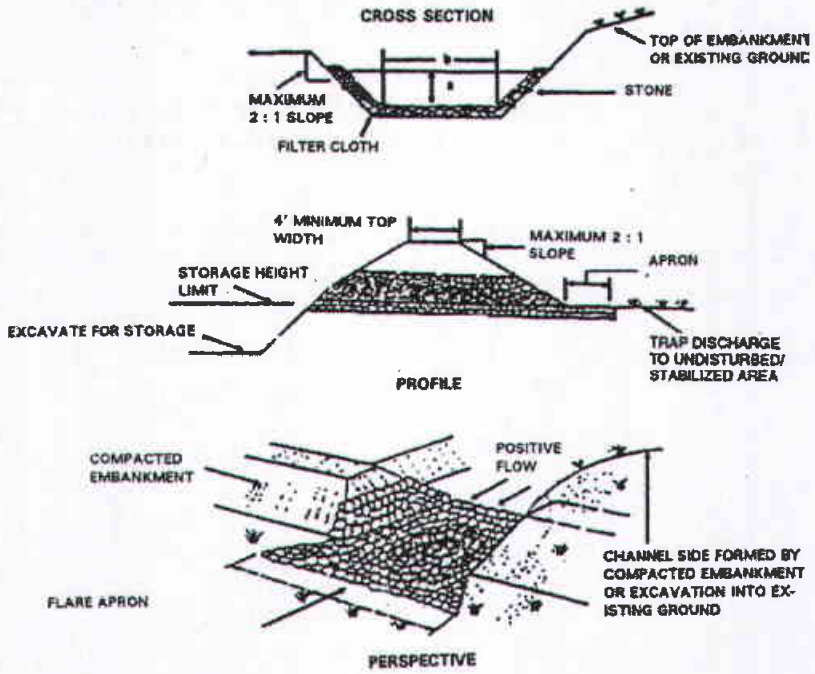


Figure 8. Sediment trap (from U.S. Environmental Protection Agency, 1992).

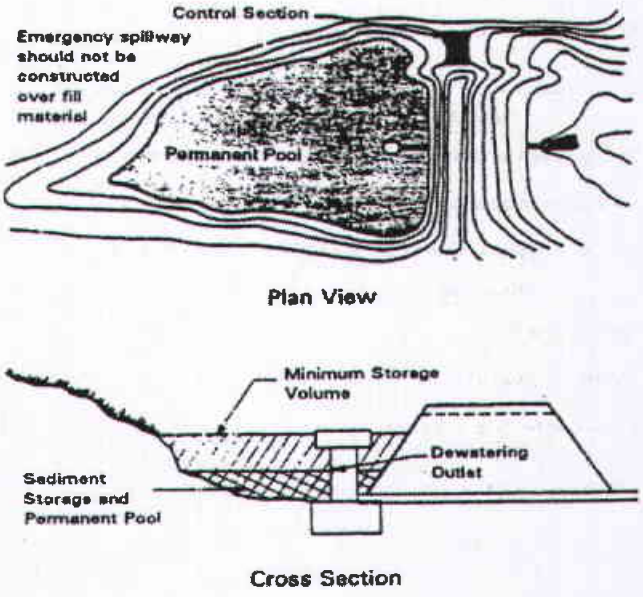


Figure 9. Sediment basin (from U.S. Environmental Protection Agency, 1992).

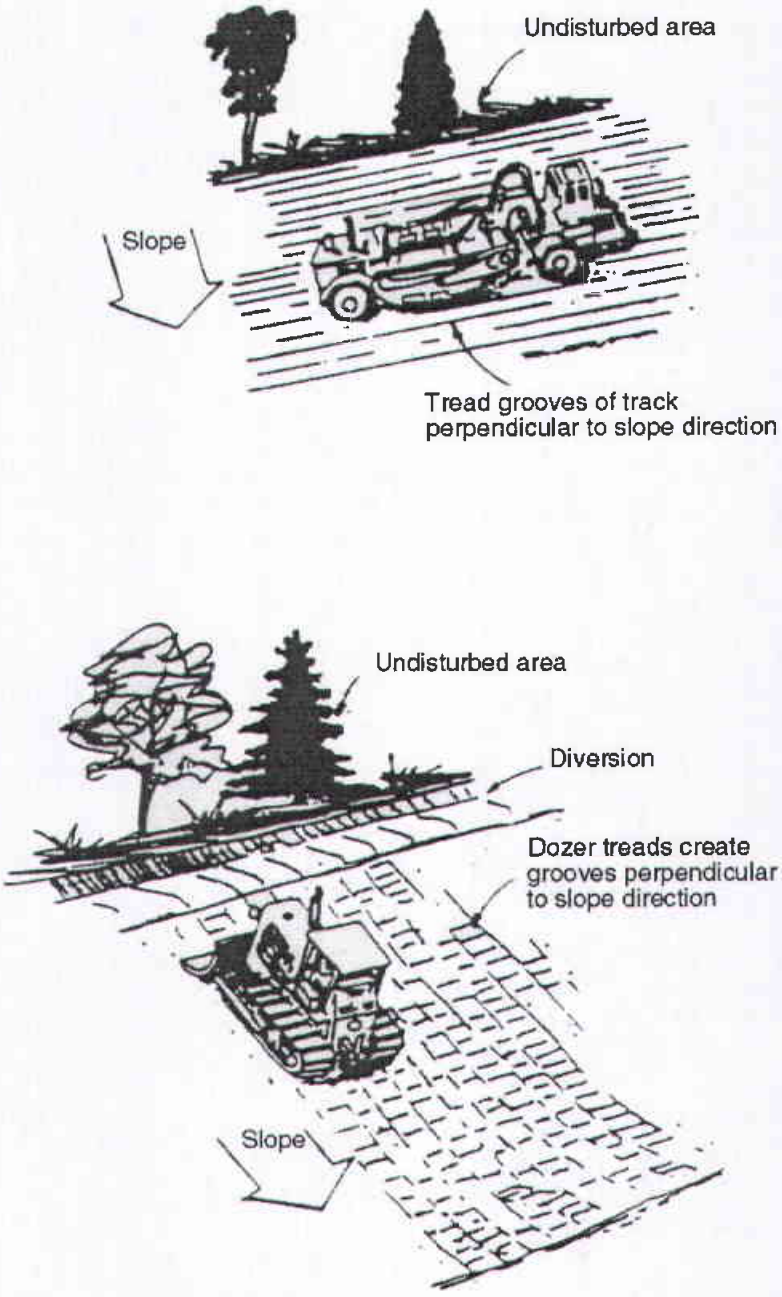


Figure 10. Slope roughening (from U.S. Environmental Protection Agency, 1992).

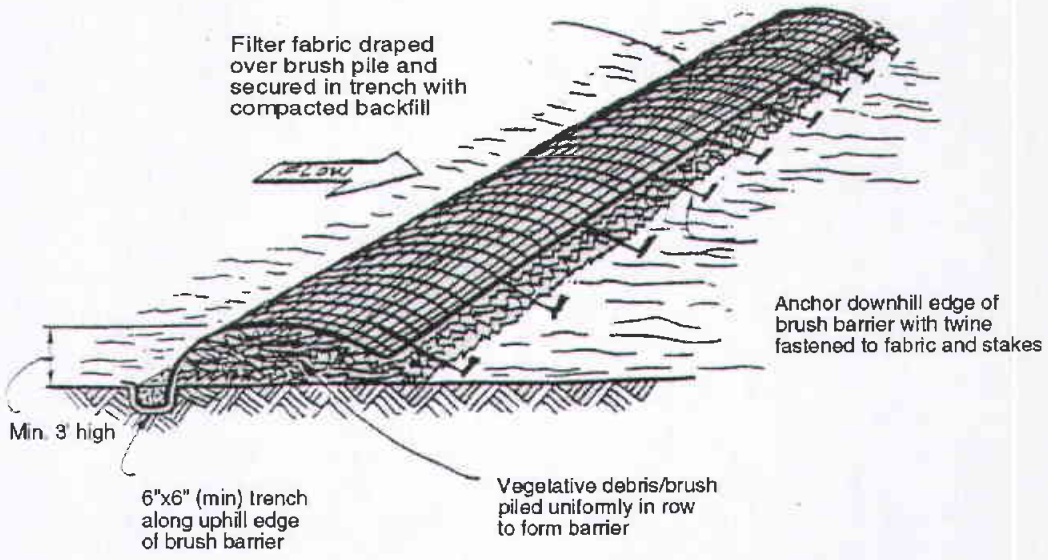


Figure 11. Brush barrier (modified from Lincoln, 1996).

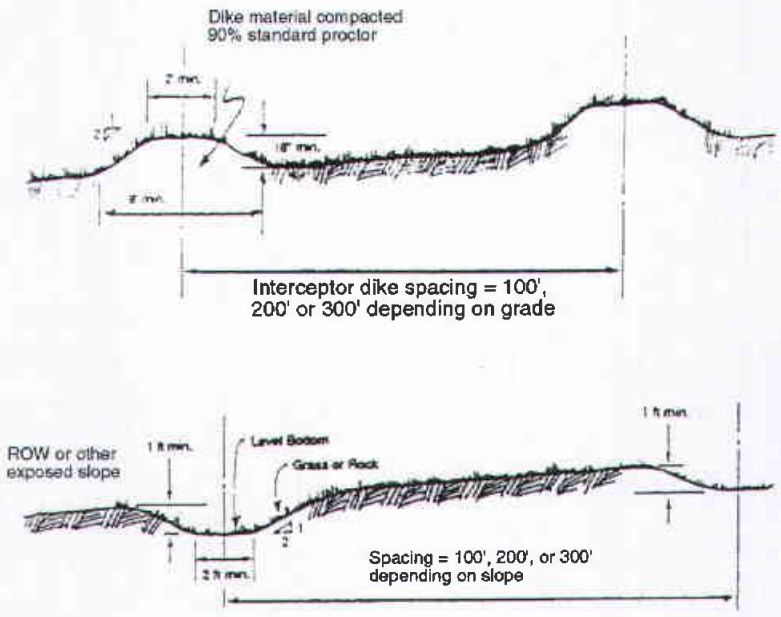


Figure 12. Interceptor dikes and swales (modified from Lincoln, 1996).

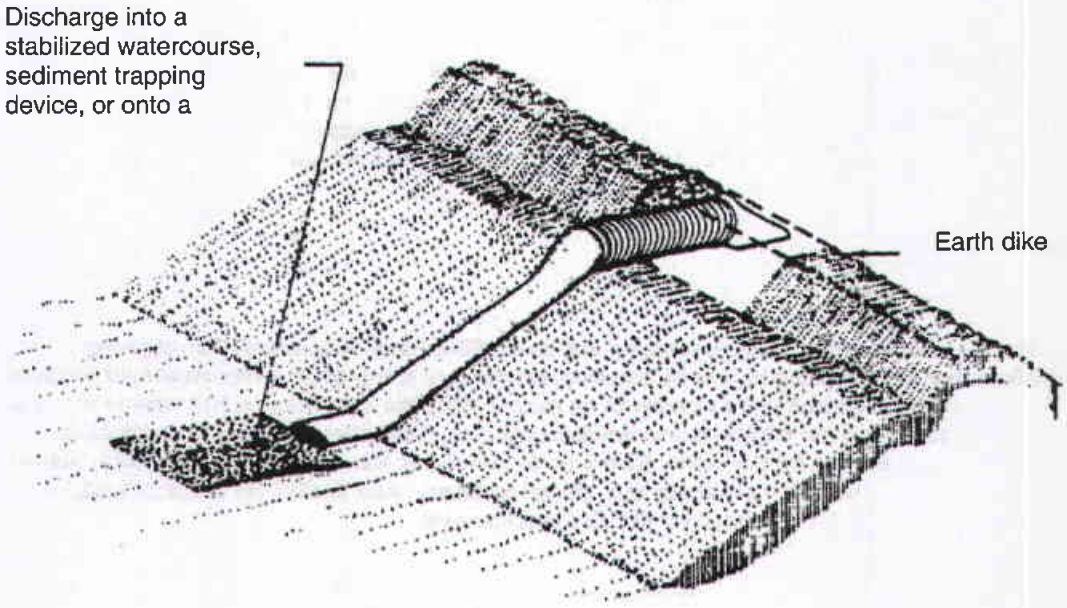


Figure 13. Pipe slope drain (from U.S. Environmental Protection Agency, 1992).

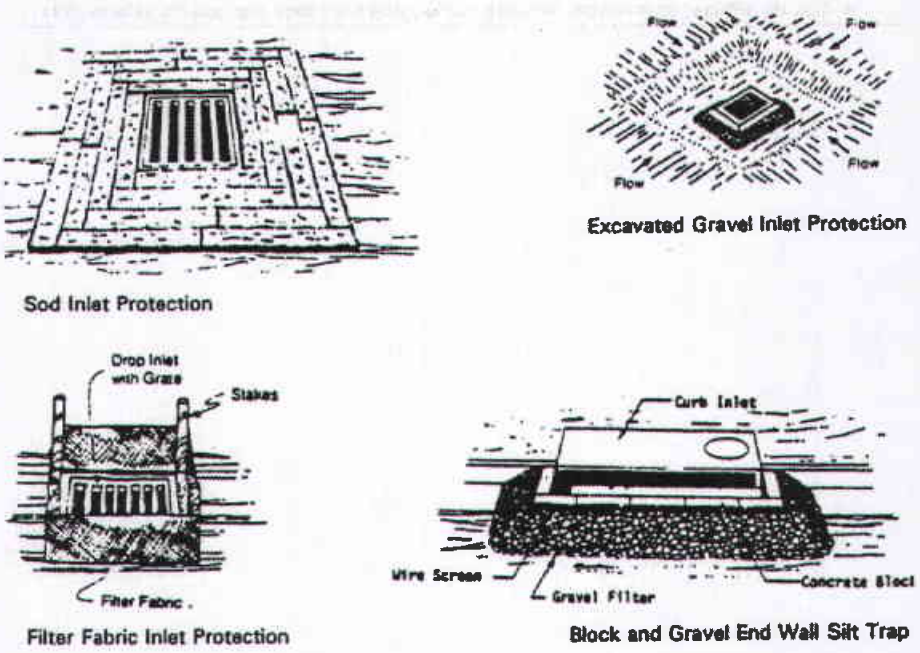


Figure 14. Drain inlet protection (from U.S. Environmental Protection Agency, 1992).

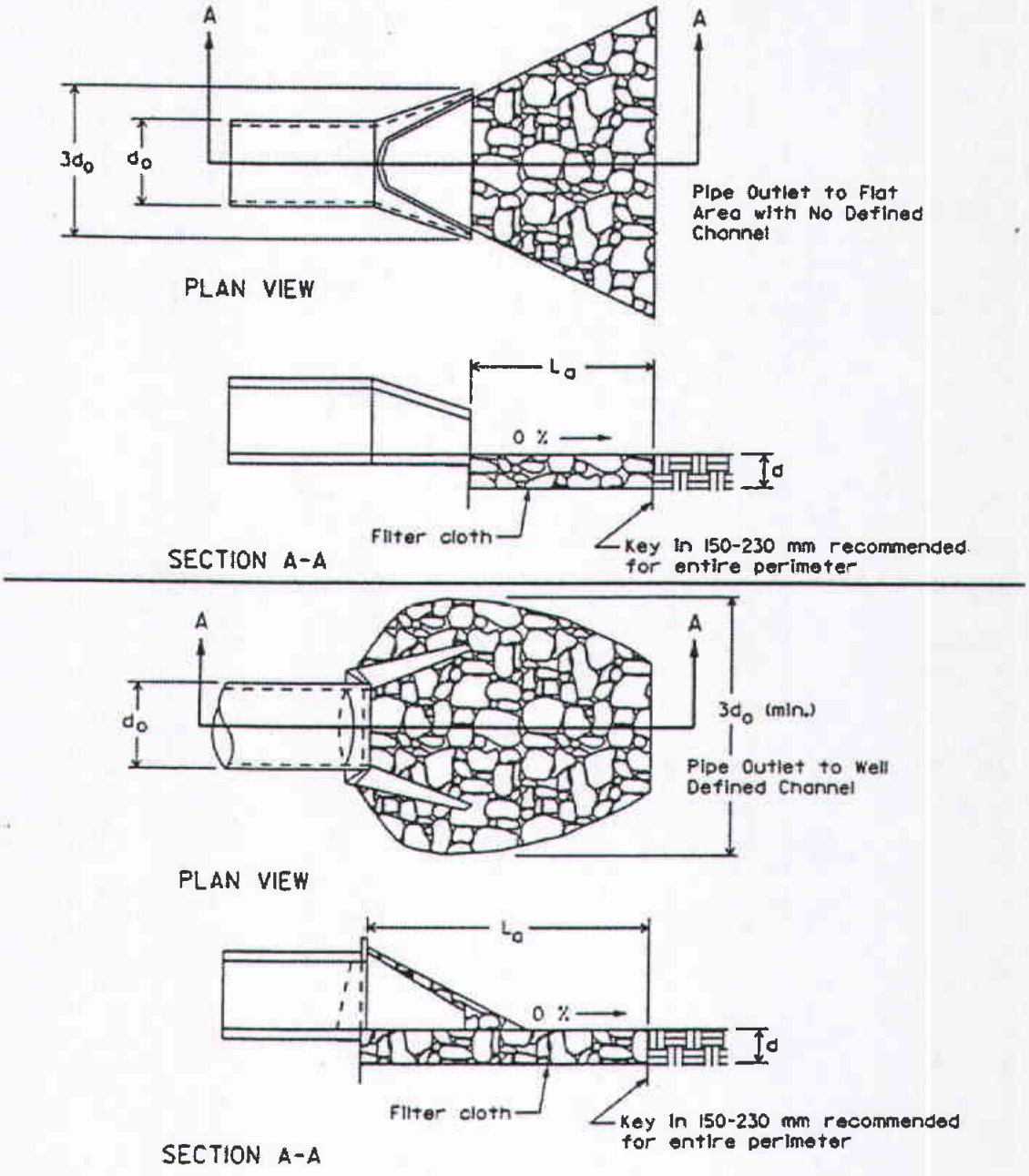


Figure 15. Culvert outlet protection (from U.S. Department of Transportation, 1995).

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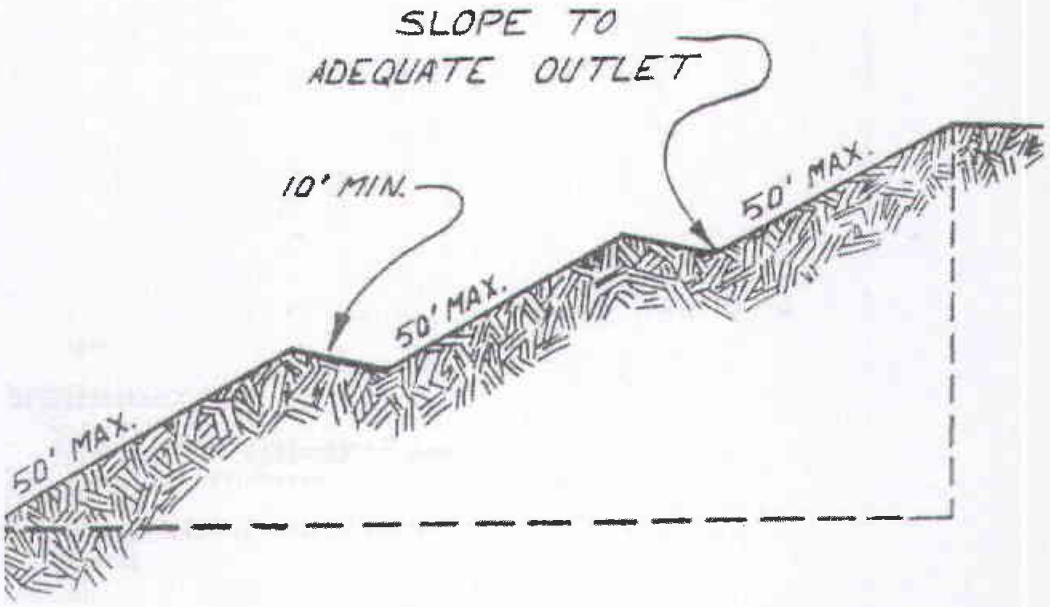

Figure 16. Terraced slopes (modified from Lincoln, 1996).

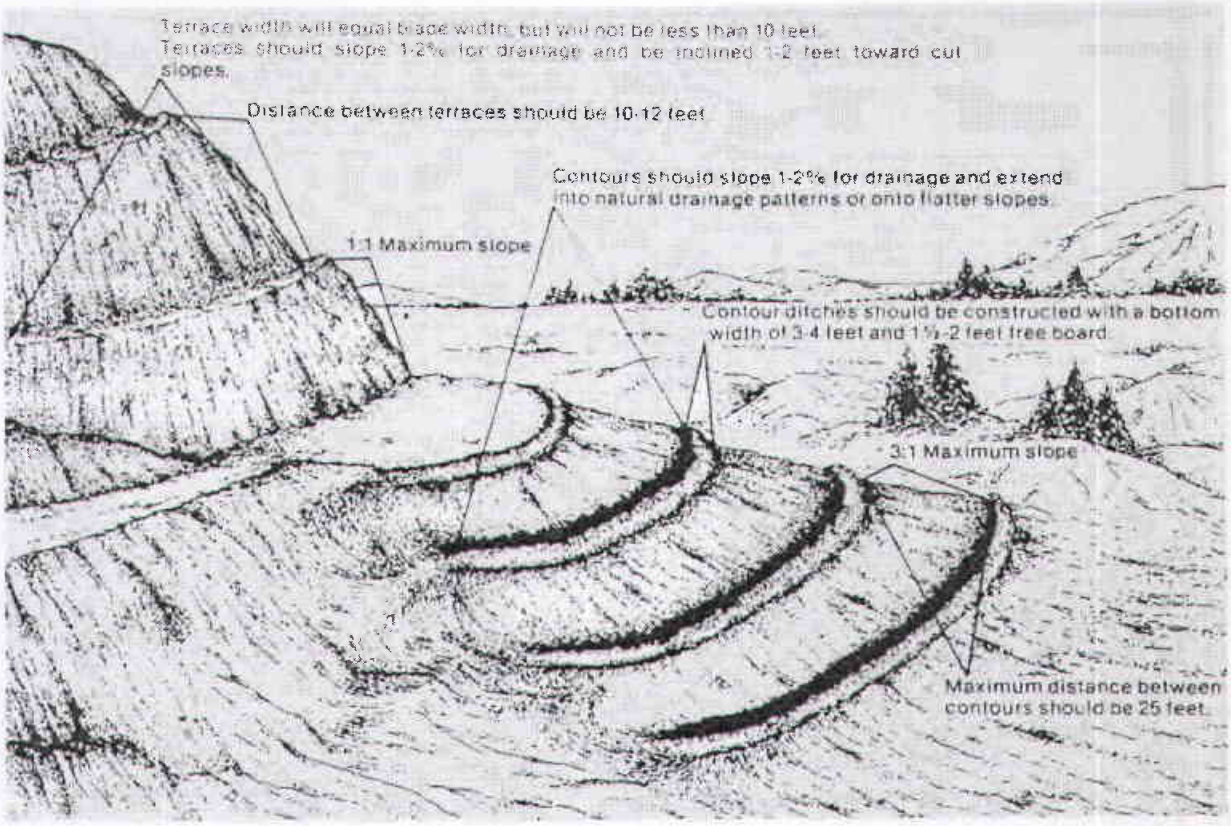

Figure 17. Well site restoration and stabilization
(from U.S. Bureau of Land Management, undated,
Surface Operating Standards for Oil and Gas Exploration and Development).

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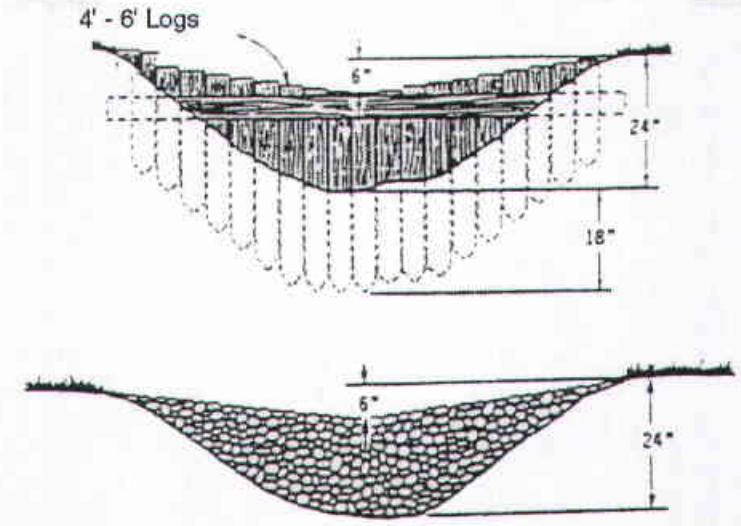
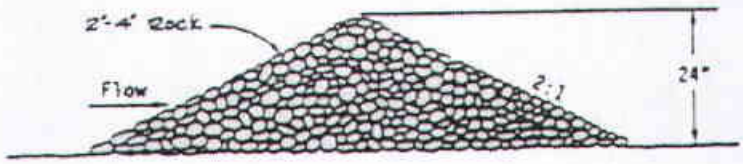


Log check dam

No scale



Rock check dam

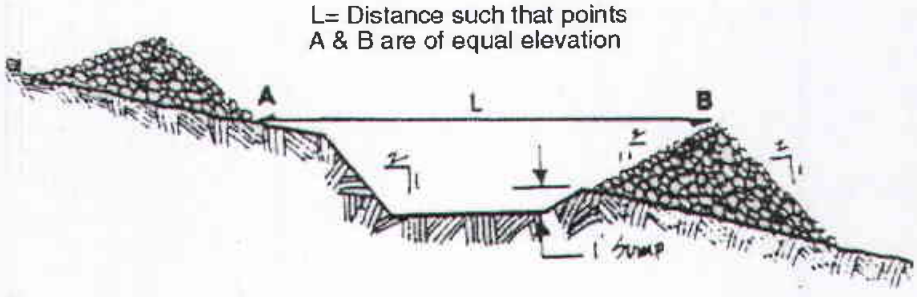


Figure 18. Check dams (from Lincoln, 1996).

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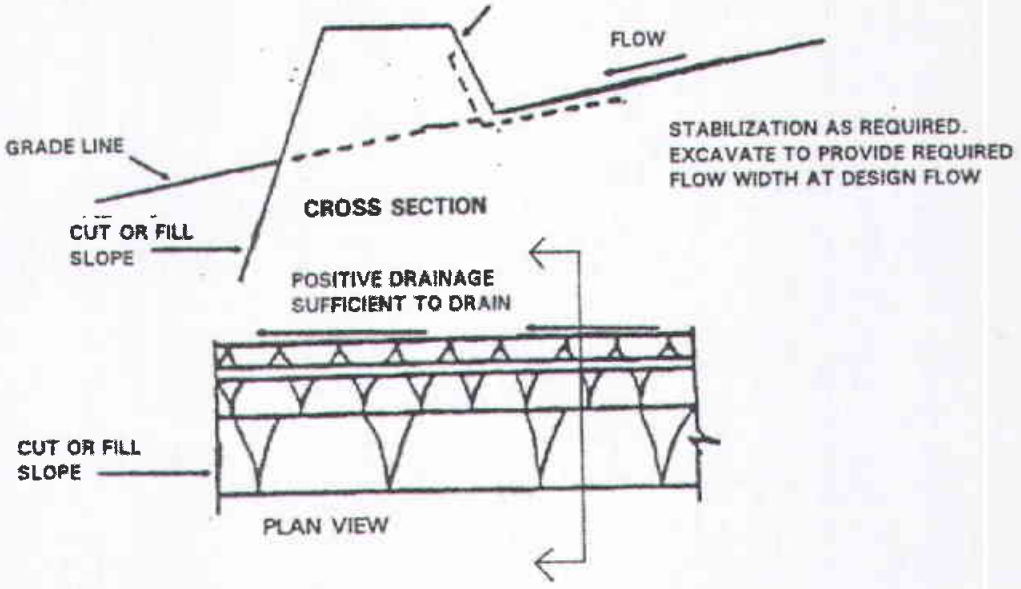


Figure 19. Earth dike (from U.S. Environmental Protection Agency, 1992).

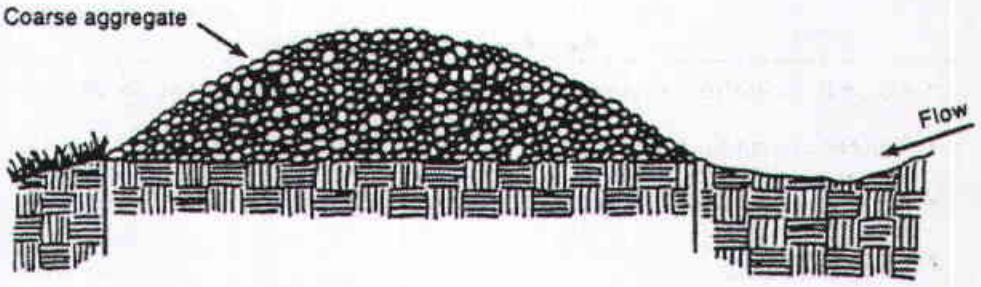
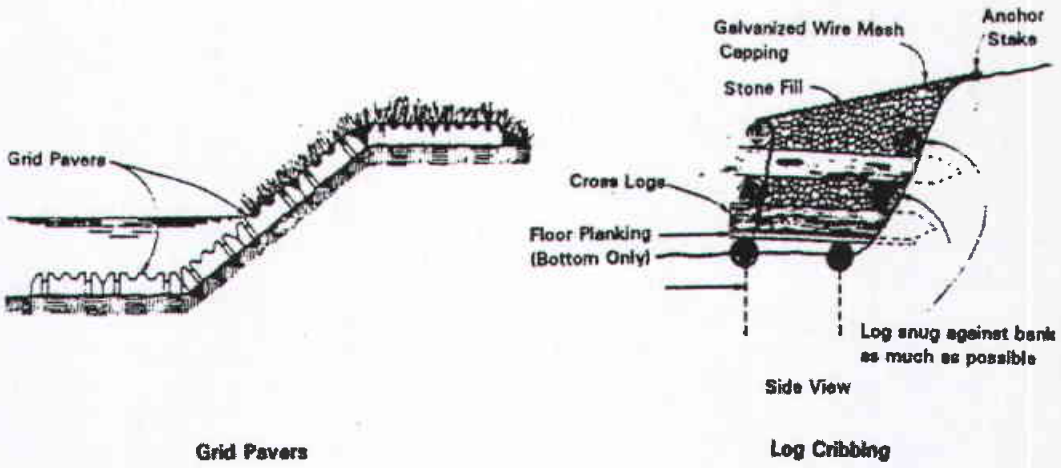


Figure 20. Gravel filter berm (U.S. Environmental Protection Agency, 1992).



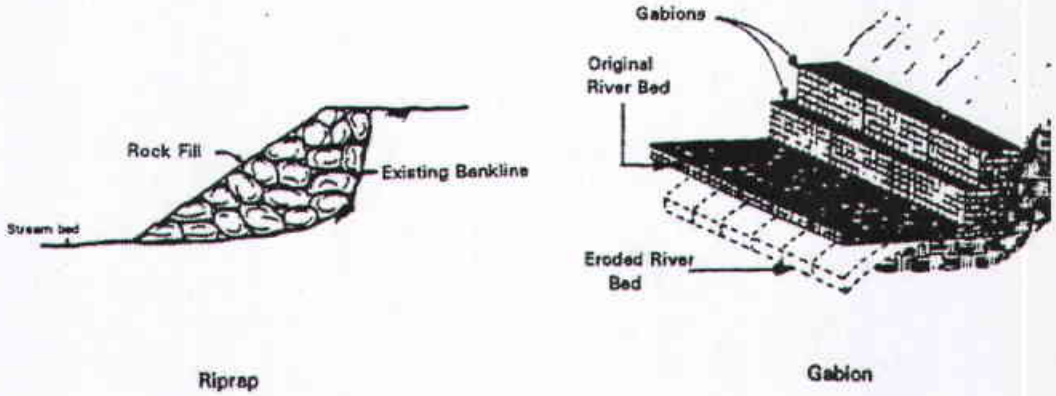


Figure 23. Structural and biological streambank stabilization (from U.S. Environmental Protection Agency, 1992).

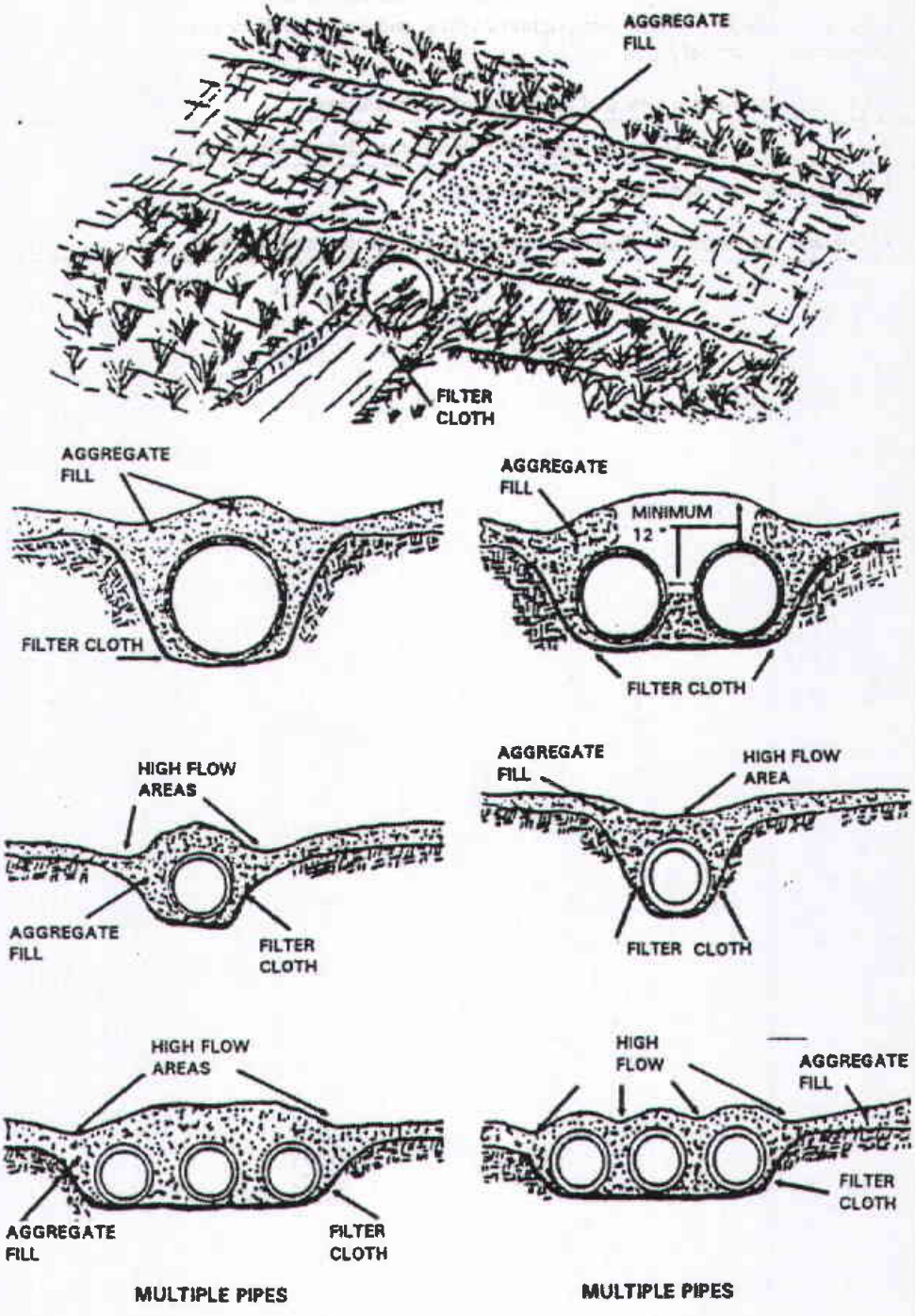


Figure 21. Culverts (from U.S. Environmental Protection Agency, 1992).

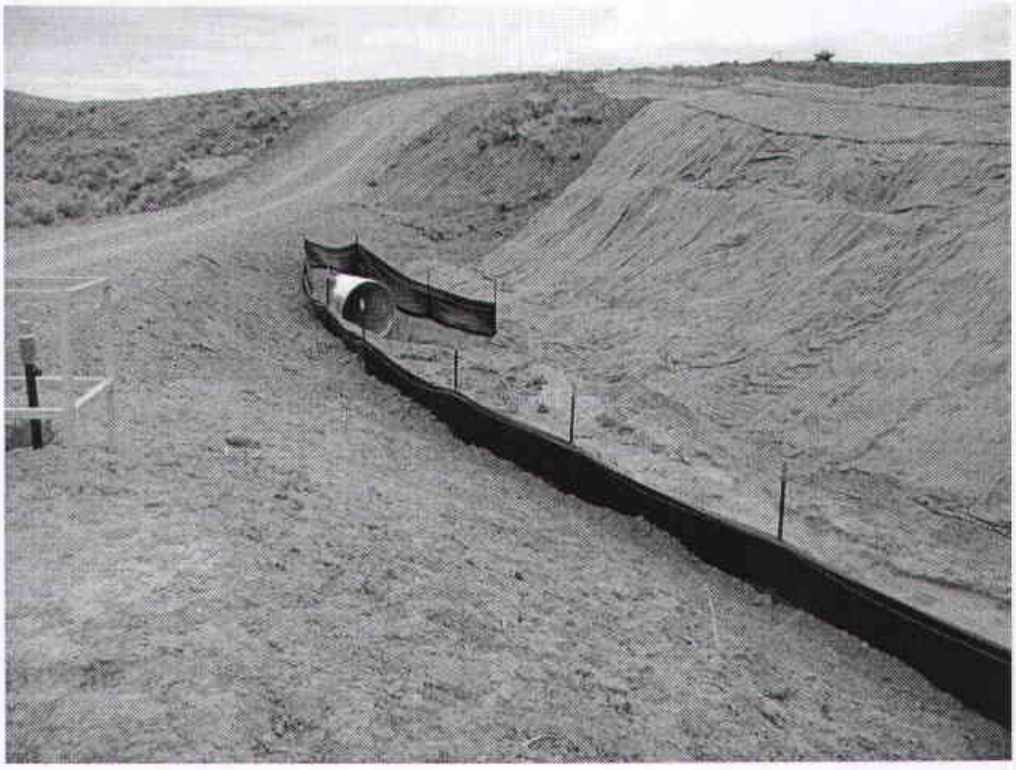


Figure 24. Example of use of silt fence and geotextiles.

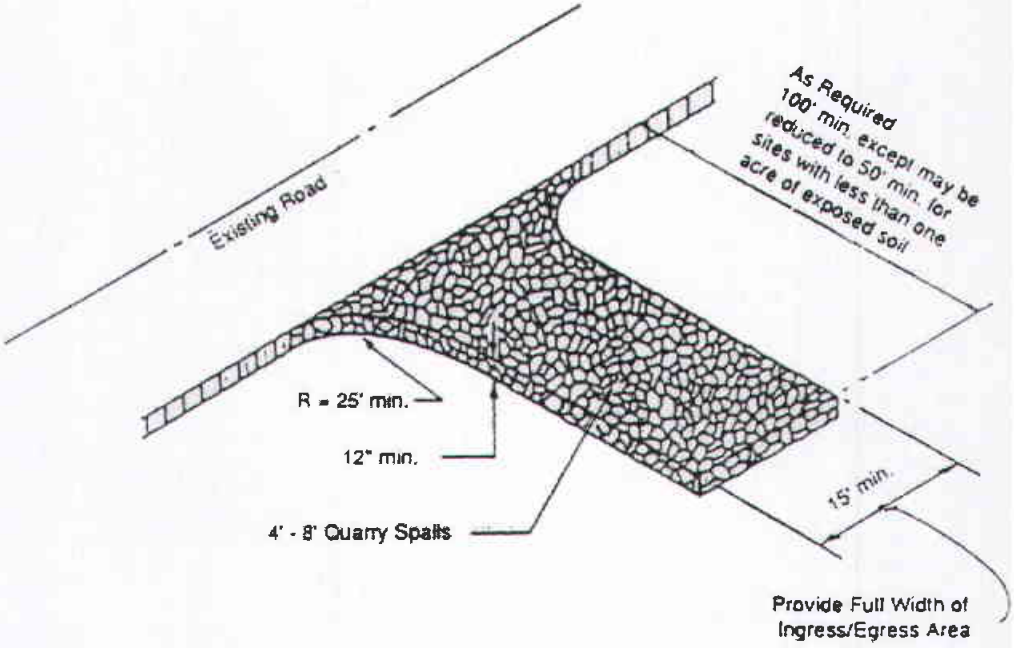


Figure 22. Stabilized construction entrance and tire wash (from Lincoln, 1996).